

Vegetables Network

Working Groups: *Allium*, *Brassica* Cucurbits, Leafy Vegetables, Solanaceae and Umbellifer Crops.

The **Vegetables Network Coordinating Group** consisted of 11 members: Dave Astley, United Kingdom (Network Coordinator until November 2009); Marie-Christine Daunay, France (Network Coordinator as of November 2009), Noortje Bas, The Netherlands; Ferdinando Branca, Italy; Maria José Díez, Spain; Willem van Dooijeweert, The Netherlands; Emmanuel Geoffriau, France; Joachim Keller, Germany; Teresa Kotlińska, Poland, replaced by Charlotte Allender, United Kingdom in November 2009; Katerina Karlová-Smékálová, Czech Republic; and Rob van Treuren, The Netherlands.

The **Vegetables Network held its Third Meeting in Catania, Italy**, on 10-12 November 2009, hosted by the University of Catania. About 60 representatives of the six WGs gathered from 30 countries to discuss cooperative action for vegetable genetic resources conservation and use. The main objective of the meeting was to make the European Genebank Integrated System (AEGIS) work within the framework of the Vegetables Network, by ensuring that all the members understand what it is, how it intends to operate and also to understand its technical and scientific concepts, as well as the responsibilities of each member within their country and as a member of the Network. The experiences gained by the model crop groups (*Allium* and *Brassica*) and by the Solanaceae WG in their attempt to identify Most Appropriate Accessions (MAAs) were shared with the meeting. It was agreed that a positive approach to deciding what should be included in the European Collection would be to focus, as a first step, on what needs to be conserved rather than on what should be excluded. Efforts will be made to complete the Central Crop Databases as well as to include missing data into EURISCO. Efforts to identify MAAs will focus, as a priority, on leek and wild Alliums, lettuce and spinach, carrot, melon, *B. rapa* and various Solanaceae crops. A general consensus was expressed by the Group about the principles of AQUAS and the need to define common standards.

Surveys of wild relatives of *Allium* and Umbellifer crops in collections and in the wild are planned during Phase VIII, to identify gaps in the collections and to carry out characterization work. Characterization activities are also planned for collections of *B. rapa* and wild brassicas.

Surveys of landraces are planned by the *Allium* WG, while the Cucurbits WG intends to survey on-farm conservation activities. Work on the definition of descriptors was scheduled by the Leafy Vegetables WG (for asparagus and minor leafy vegetables) and by the Umbellifer Crops WG (agreed minimum lists). Improving safety-duplication will be a task for the *Allium*, Cucurbits, Leafy Vegetables, Solanaceae and Umbellifer Crops WGs. The assessment of virus elimination training needs in Europe and the establishment of a Web Portal will be specific activities of the *Allium* WG.

After the resignation of Dave Astley (Warwick HRI, United Kingdom) as Coordinator of the Network, the Network Coordinating Group nominated Marie-Christine Daunay (INRA, France) as its new Coordinator, with Willem van Dooijeweert taking the role of Vice-Coordinator.

During the Umbellifer Crops WG session, as part of the Vegetables Network meeting in November 2009, Emmanuel Geoffriau, France was confirmed as the Chair of the WG and Charlotte Allender was selected as Vice-Chair, replacing Teresa Kotlińska, Poland. The draft report of the meeting and the presentations made are available on the ECPGR Web site at:

http://www.ecpgr.cgiar.org/Networks/Vegetables/VEGNET_3_%20Catania_revised_full_report.pdf

As of January 2009, a new search option became available for the **ECPGR Tomato Database**, maintained at CGN, Wageningen, The Netherlands. This tool allows grouping of “probable duplicates” by comparing data in the following fields: accession name, collecting number, donor number and other numbers. This tool offers a guide for the selection of material and is also a first step towards the selection of MAAs in tomato. A total of 7892 accessions were assigned to 2491 duplication groups. As of March 2009, it is also possible to search about 1200 accessions in the Tomato database for the minimum characterization descriptors agreed upon by the Solanaceae WG.

The **European Brassica Database** (<http://documents.plant.wur.nl/cgn/pgr/brasedb>) was updated. The database can be searched online for probable duplicate accessions in the *Brassica rapa* collections which, as of October 2009, include a total of 3621 accessions. Probable duplicates were assessed by comparing names and donor/collection/other numbers as well as known synonyms. A total of 1698 accessions were assigned to 545 *B. rapa* duplication groups.

A total of 866 **safety-duplicate accessions of cucurbit crops** were sent under a black-box arrangement by IPGR Sadovo, Bulgaria to CGN, Wageningen, The Netherlands.

The Vegetables Network submitted five **proposals for funding to the AEGIS Grant Scheme**. These were prepared by partners from Germany (garlic), Portugal (*Brassica oleracea*), United Kingdom (*Brassica* and Umbellifer crops) and Ukraine (eggplant).

The Network started elaborating an overview of the management activities of collection holders, following the example of the Brassica WG in the framework of the AEGIS pilot study. However, the coordination of this initiative was subsequently taken over by the ECPGR Secretariat as part of the implementation of the Quality System for AEGIS.

As part of the collaboration with ECPGR for the AEGIS implementation, a Master Thesis was started by Andreas Breuing, University of Hannover, on the "Evaluation of costs for long-term storage of *Allium sativum* genetic resources at the Gatersleben genebank - Comparison of the methods, field maintenance and cryopreservation". Daniel Horna from the International Food Policy Research Institute (IFPRI), Washington DC, USA, assisted in the definition of the strategy for this study.

The following **report** was made available on the Web: Report of a Vegetables Network. Second Meeting, 26-28 June 2007, Olomouc, Czech Republic

http://www.ecpgr.cgiar.org/Networks/Vegetables/VEGNET_2_Olomouc.pdf

Outlook for 2010: activities planned by the Network include: the Fourth *Brassica* WG Meeting on 2-3 March 2010, Linguaglossa, Italy; the Second Meeting of the Cucurbits WG on 9-11 November 2010, Tbilisi, Georgia; activities to improve safety-duplication of Cucurbits and Solanaceae; and development and implementation of specific algorithms to facilitate the identification of duplicates in databases. The Vegetables Network will also submit a paper to the 28th International Horticulture Congress (IHC) to be held in Lisbon, Portugal on 22-27 August 2010. This will be prepared by the NCG members and will summarize the Network's achievements. The Network is expected to contribute to the validation of a template for an operational genebank and to the development of generic operational genebank standards, as well as to start the drafting of minimum crop standards in order to progress with the implementation of AEGIS.

3.7. Documentation and Information Network

The **Documentation and Information Network Coordinating Group** consisted of 11 members: Frank Begemann, Germany (Network Coordinator); Iva Faberová, Czech Republic; Theo van Hintum, The Netherlands; Helmut Knüpfner, Germany; Jonas Nordling, Sweden (NordGen); Idin Fazlic, Bosnia and Herzegovina (SEEDNet); Ahmet Semsettin Tan, Turkey; Ian Thomas, United Kingdom. The *ex officio* representatives were Sónia Dias and Lorenzo Maggioni, ECPGR Secretariat, Rome; Michael Mackay, Bioversity International, Rome; and José Iriondo, Spain (*In situ* and On-farm Network representative).

An EPGRIS3 self-funded workshop was held on 7 May 2009 at the Bundesanstalt für Landwirtschaft und Ernährung (BLE) in Bonn, Germany, including 12 participants collaborating in EPGRIS3 activities 2-05 (Characterization and Evaluation data) and 2-06 (Link to the ECPGR Central Crop Databases).

A proposal for inclusion of characterization and evaluation (C&E) data into EURISCO, presented by Theo van Hintum, CGN, The Netherlands, was discussed and reached general consensus around the following concepts:

- "It is not feasible to enforce any standardization in terms of experimental design, the use of standards or even the scale of measurement";
- "All (potential) data donors should be able to export their data, as they have it, in a common format, provided that this is a flexible format";
- "The value of C&E data is that high to a user that she/he is willing to invest time in analyzing the data".

The principle of creating a repository of non-standardized C&E data in the framework of EURISCO was also adopted, with the addition that the repository should only be used for non-confidential data.

It was stressed that only C&E data on accessions already in EURISCO could be uploaded. However, it was decided that any registered “uploader” (the National Focal Point, or someone approved by the NFP) can upload data on any EURISCO accession, i.e. not only on accessions in the National Inventory of the “uploader”. More details on this workshop are available at:

<http://www.epgris3.eu/EPGRIS3%2020090507workshop.htm>

A revised proposal for inclusion of C&E data into EURISCO, including a road map, was then drafted, circulated to the Network members and sent for information to the Steering Committee. The proposal was eventually approved by the Documentation and Information Network in June 2009 (see <http://www.epgris3.eu/docs/activities/2-05/Inclusion%20of%20C&E%20data.pdf>).

The road map to the inclusion of C&E data into EURISCO was revised in July 2009. This foresees a process of collaboration with Bioversity International, apart from the implementation of the procedures in EURISCO, also specifically in the context of the development of the GENESYS catalogue of the Global Information on Germplasm Accession (GIGA) project. A self-funded meeting to discuss the options for creating synergies between EURISCO and GENESYS was held at CGN in Wageningen, The Netherlands in December 2009. CGN, NordGen, BLE and IPK made themselves available to deliver the first data sets for developing and testing the EURISCO infrastructure in Rome.

The Network was heavily involved in the preparation of the EUROGENEBANK project proposal, that was submitted for funding in December 2009 under the EU 7th Framework Programme call for proposals on “Research Infrastructures – Support to existing research infrastructures – Integrating Activities”. Two Work Packages focusing on documentation aspects were prepared (WP7 and WP8):

- WP7, coordinated by the Centre for Genetic Resources (CGN), The Netherlands, intending to “Upgrade PGR information management and interfaces”. This Work Package was strongly based on the “wish list” as developed by EPGRIS3, and involved the following participants: Bioversity International, Italy; the Federal Agency for Agriculture and Food (BLE), Germany; the Crop Research Institute (CRI), Czech Republic; the Institute of Biological, Environmental and Rural Sciences, Aberystwyth University (IBERS), UK; the Leibniz-Institut für Pflanzengenetik und Kulturpflanzenforschung (IPK), Germany; the Julius-Kühn-Institut - Bundesforschungsinstitut für Kulturpflanzen (JKI), Germany; The Nordic Genetic Resource Center (NordGen), Sweden; and the Royal Museum for Central Africa (RMCA) Belgium. Planned tasks included: the creation of crop portals for a number of model crops; data mobilization for more and better data in EURISCO; increased quality and quantity of EURISCO passport data; improved public Web-interface to EURISCO; application of Web-services technology for uploading National Inventory data to EURISCO; creating a repository and interface for C&E data; and creating trait ontology on the basis of the C&E data repository.
- A second Work Package (WP8), led by Bioversity International, intended to “Ensure free access to data through EURISCO”, with the aim to provide support (i.e. training, seminars and helpdesk function) to users, improve functionalities and add new tools to EURISCO.

H. Knüpfner (IPK, Gatersleben) represented the ECPGR Documentation and Information Network in the International Organizing Committee of the annual conference of Biodiversity Information Standards (TDWG; www.tdwg.org) on “E-Knowledge about Biodiversity and Agriculture”, held 9-13 November 2009 in Montpellier, France. For the first time, a TDWG conference focused on agriculture and plant genetic resources. Out of almost 300 participants, more than 50 represented agricultural research and plant genetic resources, half of these from France, and about ten represented ECPGR. A number of presentations, parallel working sessions and posters were devoted to aspects of plant genetic resources documentation and information.

EURISCO in 2009

The European countries’ representation within EURISCO increased to 40 countries, with the inclusion of the National Inventories (NIs) of Belarus, Croatia and Montenegro.

Regarding the National Inventory Focal Points (NFPs), 12% were newly appointed and 14% were replaced, thereby requiring support and training from the Secretariat.

The EURISCO Web site content was updated with information, public awareness materials, documents and links to other important sources of information.

Three more downloadable EURISCO fact sheets were made available, now covering 15 different languages (see: http://eurisco.ecpgr.org/releases/fact_sheet.php). Translations were provided as in-kind contributions by the NFPs. In 2009, the Albanian, Armenian, Portuguese, and Russian versions were made available for the first time.

The EURISCO poster was updated several times and is available for download at:

<http://eurisco.ecpgr.org/releases/posters.php>

In an attempt to further increase the taxonomy data quality in EURISCO and the National Inventories, a total of 333 reports were sent to the NFPs in December 2009. In these reports, all the taxa of a given National Inventory that did not match or only partially matched the GRIN Taxonomy were indicated, inviting the NFPs to check whether it would be appropriate to make corrections in their country's genebank documentation systems and in their National Inventories.

EURISCO data were regularly provided to GBIF (Global Biodiversity Information Facility). At the 10th Meeting of the GBIF Participant Nodes Manager Committee in Copenhagen, 2-5 October 2009, a poster was presented, entitled "EURISCO, European Plant Genetic Resources Portal: A Biodiversity Thematic Network in GBIF".

At the TDWG annual conference on "E-Knowledge about Biodiversity and Agriculture" on 9-13 November 2009, Montpellier, France, EURISCO was presented with an oral presentation, a computer demonstration and a poster.

Four "EURISCO Seminars and Trainings" were organized with the objective of strengthening national capacity in data exchange and the sustainability of EURISCO, as well as to improve data completeness by enhancing the quality and quantity of data flow into the Catalogue. These seminars and trainings were held in Yerevan, Armenia (April 2009), St. Petersburg, Russian Federation (May 2009), Kharkov, Ukraine (October 2009) and Banja Luka, Bosnia and Herzegovina, where Serbian partners also attended (November-December 2009). In addition, a "Training workshop" was held in Prague, Czech Republic, 29-30 June 2009, partly funded by the Documentation and Information Network as an activity (5-01) of the EPGRIS3 self-funded project. Funding from ECPGR and the South East European Development Network on Plant Genetic Resources (SEEDNet) allowed the participation of 30 National Focal Points and documentation experts.

These seminars and trainings have involved a total of 113 people, have contributed to the updating of the National Inventories and resulted in agreed outputs and recommendations for the National Inventories. For more information see: http://eurisco.ecpgr.org/contact_menu/training.php.

During 2009, the number of visitors to EURISCO reached more than 7500, with a 50% increase in new visitors, and almost 50% of visitors returning. The information maintained in EURISCO has been searched from 102 countries (26 countries more than in 2008).

Two e-bulletins (July and December) were made available on the EURISCO Web site (<http://eurisco.ecpgr.org/releases/issues.php>), as well as disseminated via e-mail to more than 200 individuals. Three external contributions were provided, by Armenia and GRIN Global in July and by Bosnia and Herzegovina in December. Three articles giving updates on EURISCO were published in the 2009 issues of Bioversity's Newsletter for Europe.

The process for the renewal of the EURISCO data sharing agreement for the period of 2010-2020 was initiated. The data sharing agreement will be compliant and in harmony with the International Treaty on Plant Genetic Resources for Food and Agriculture and also with EURISCO's function as a network data provider to other major PGR information hubs of significant interest for the PGR community.

Some facts and numbers are worth highlighting regarding changes and improvements in EURISCO during 2009:

- The total number of accessions has decreased by 84 226, reaching a total of 1 049 469 accessions in December 2009;
- Three new NIs joined (Belarus, Croatia and Montenegro), raising the number of participating countries to 40;
- There was an increase of 46 data sources, reaching 297 institutes conserving PGR;
- The number of species names (including synonyms and spelling variants) represented in EURISCO increased by 25 817 species, reaching 34 556 species;
- More than 47% of the NIs were updated during 2009;

- As for the type of materials maintained in these NIs and searchable through EURISCO, these are “wild” 10%, “landraces” 25%, “breeding” 15% and “improved cultivars” 19% of the total material documented in EURISCO;
- Multilateral System (MLS) registration increased from 14% in 2008 to almost 20% in 2009 of the EURISCO total accessions, and from 11 to 13 countries. MLS accessions registered in EURISCO cover around 66% of the genera from Annex I of the ITPGRFA.

Outlook for 2010: activities planned by the Network include the organization of the Fourth Meeting of the Network Coordinating Group in Maccaresse, Italy on 17-18 February 2010, and the organization of a Second Capacity Building Inter-regional Workshop on International Treaty Implementation, jointly with the Inter-regional Cooperation Network.