



# newsletter

## for Europe

### Inside this issue

ECP/GR	1-6
Central Asia & Caucasus	8-9
EUFORGEN	12-13
IPGRI in Europe	14

### About this Newsletter

The International Plant Genetic Resources Institute (IPGRI) is one of the 16 Centres of the Consultative Group on International Agricultural Research (CGIAR). IPGRI's goal is to advance the conservation and use of genetic diversity for the well-being of present and future generations. From its headquarters in Rome and its regional offices, IPGRI promotes and coordinates the action needed for the conservation of these genetic resources.

IPGRI's Regional Office for Europe provides the Coordination Secretariats for the European Cooperative Programme for Crop Genetic Resources Networks (ECP/GR) and for the European Forest Genetic Resources Programme (EUFORGEN).

IPGRI publishes two issues of the Regional Newsletter for Europe a year. This Newsletter is intended to serve as an informal forum for the exchange of news and views, and to create closer ties within the genetic resources community in Europe. Previous issues are available from the IPGRI website.

A Russian version of this Newsletter is being produced and disseminated in collaboration with the N.I. Vavilov Research Institute of Plant Industry (VIR) in St. Petersburg.

We invite you to send your ideas and contributions for this Newsletter to IPGRI's Regional Office for Europe. Please send all contributions for Issue 28 by **15 March 2004**.

## ECP/GR Steering Committee launches Phase VII

The ninth Steering Committee (SC) meeting of ECP/GR could well stand out as a milestone in the 23 year existence of the Programme. The SC was hosted 22-25 October 2003 in the quiet surroundings of Menemen, Izmir, Turkey. The warm hospitality of the Aegean Agricultural Research Institute and the pleasant weather helped to create an optimal setting for the four-day meeting, which led to the development of a strategy for Phase VII (2004-2008) of ECP/GR and a mechanism to ensure advanced strategic planning and the monitoring of results.

The structure and role of the Network Coordinating Groups (NCGs) was defined in detail, with more responsibility being assigned to these bodies for identifying priorities and actions within each Network. New rules for the participation of Working Group (WG) members in ECP/GR meetings were agreed upon, and a fixed quota of funded participants for each member country was agreed upon for the new Phase. An additional WG Chair quota was also decided at the discretion of the Chairs.

A detailed planning and prioritizing mechanism was established, to enable priorities and actions to be defined for each subsequent Phase. Approximately ten WGs will be prioritized for funding during each Phase, while the remaining WGs will still receive minimum support from the Secretariat. Four main issues were endorsed as future ECP/GR priorities for Phase VII:

- Characterization and evaluation (including use of modern technologies);
- Task sharing;
- *In situ* and on-farm conservation; and

- Documentation and Information.

Members of the NCGs and WGs will develop proposals on how to allocate the funds assigned to each Network within the Phase, including meetings, publications or other actions, and final decisions will be taken by June 2004 by the SC. A few changes to the structure of the Networks were agreed upon, including the merging of the Vegetables and Minor Crops Networks, and the expansion of the Grain Legumes Network into an Oil and Protein Crops Network. The Industrial Crops and Potato Network was renamed as the Sugar, Starch and Fibre Network. Three new Working Groups were established, namely: Cucurbits; Leafy vegetables; and Fibre crops (flax and hemp).

A project focusing on the sharing of responsibilities as a possible model for a European Genebank Integration System (AEGIS) was endorsed for ECP/GR funding. The main objectives of this project are to focus on a few model crops, assessing existing options for responsibility sharing at the European level and assessing institutional capacities and bottlenecks in order to propose an AEGIS model.

The SC redefined its composition, offering new observer status to the European Association for Research on Plant Breeding (EUCARPIA) and maintaining the European Man and the Biosphere Programme (EuroMAB), FAO, IPGRI, the International Seed Federation (ISF), the Nordic Gene Bank (NGB) and the Non Governmental Organizations (NGOs) as traditional observers. The European Commission (EC) was again invited to join the Programme as a member.

Representatives of 32 member countries attended the SC meeting as well as IPGRI, FAO, the EC, the European Consortium for Organic Plant Breeding (ECO-PB) and Pro Specie Rara, who represented European NGOs involved with PGR. Six non-member countries also attended, including Azerbaijan, and Bosnia and Herzegovina, who declared their intention to join the next Phase of ECP/GR (see article page 2).

A total budget of nearly 2.2 million euro was approved for five years. The report of the meeting and a list of selected background documents is available from [www.ecpgr.cgiar.org/SteeringCommittee/SC9.htm](http://www.ecpgr.cgiar.org/SteeringCommittee/SC9.htm)

## International Treaty on PGRFA

In November 2001, the FAO Conference approved the International Treaty on Plant Genetic Resources for Food and Agriculture (PGRFA), as reported in Issue 22 of this Newsletter. In accordance with Article 26, the Treaty is subject to ratification, acceptance or approval. It is open for accession by all Members of FAO, and any States that are not Members of FAO but are Members of the United Nations, or any of its specialized agencies. Instruments of accession are deposited with the Director-General of FAO. In accordance with Article 28, the Treaty shall enter into force on the 90<sup>th</sup> day after 40 ratifications, acceptances, approvals or accessions, provided that at least 20 of these are by FAO Members. As of 20 November 2003 (at time of print), 33 instruments had been deposited with FAO. For more information, visit [www.fao.org/Legal/TREATIES/033s-e.htm](http://www.fao.org/Legal/TREATIES/033s-e.htm)

## Introducing a New ECP/GR Member... Bosnia and Herzegovina



Prof. Sulejman Redžić  
Center for Ecology and Natural Resources  
Faculty of Science  
University of Sarajevo  
Bosnia and Herzegovina

Bosnia and Herzegovina (BiH) expressed a strong interest in officially joining Phase VII of the ECP/GR Programme after participating in the recent Steering Committee (SC) meeting (see cover page). The benefits BiH expects from full ECP/GR membership include effective information exchange and participation in joint activities with other European countries. It also offers its own comparative advantages, such as the unique natural diversity of Plant Genetic Resources (PGR) in its territory, to contribute to the activities carried out within ECP/GR. BiH has held observer status in the ECP/GR Programme, until accepting the membership requirements specified at the recent SC meeting.

BiH was established as a republic within the Socialistic Federal Republic of Yugoslavia (SFRY) in 1945, these boundaries were maintained after signing the Dayton Peace Accords in 1995, although it existed as an independent entity since 1115. BiH is composed of the Federation of Bosnia and Herzegovina (FBiH), the Republic Srpska (RS), and the Brčko District (BD). State functions are the responsibility of the joint Council of Ministers and the State

Presidency, plus numerous institutions. Each entity and district have their own government and authorities. FBiH is divided into ten cantons, each with executive and legislative authorities. International cooperation, including biodiversity and PGR, is considered a responsibility of the state institutions.

BiH is located in the west of the Balkan peninsula, covering 51 129 km<sup>2</sup> with a population of 3.9 million. Biogeographically it can be divided into three regions: the Mediterranean region (Adriatic province); Eurosiberian-Boreoamerican region (Illyrian and Moesian provinces, plus the relict pine forest province) and the mountainous Alpine-High Nordic region (High Dinaric province). More than 50% of the territory is covered with natural forests and shrubs, the rest is a mixture of agricultural and urban areas. Different climates are found in the country (Mediterranean, sub-Mediterranean, moderate-continental, continental, and montane), as well as a variety of bedrock, soil types, a very rich hydrographic network, which all contribute to the rich and unique biodiversity found in BiH.

With about 5000 taxa of vascular plants, including 400 endemic and relict species found in this geographically small area, BiH can be considered as one of the richest in plant biodiversity in Europe. In addition to wild species, some 600 species have been used in traditional agriculture and medicine for centuries. Of special value are the wild species that have been successfully domesticated and are now grown as crops, including fruits, medicinal and aromatic plants.

Many species endemic to BiH are endangered and developing a Red Data List is a priority. Conservation efforts include protected areas such as national parks, reserves, nature and *in situ* conservation areas.

Some *ex situ* collections exist within faculties and institutes, but there is no centralized *ex situ* conservation effort or national genebank. It is hoped that by participating in ECP/GR, a National Biodiversity Centre can be established with the assistance and experience of other ECP/GR member countries.

In order to establish a more efficient system of conserving these valuable resources, priority actions include:

- assigning administrative responsibilities for PGR;
- establishing a state level Steering Committee (SC) including representatives from both entities and Brčko District, as well as from the various regions;
- establishing a legislative framework for biodiversity and PGR management activities. To date, there are no special provisions or programmes although there are laws on nature protection existing within the two entities;
- educating and training staff on optimal *ex situ* and *in situ* conservation techniques;
- effective information dissemination to educate the broader public and to gain their support and understanding, including a national web site;
- establishing a National Biodiversity Centre with a PGR department and national genebank for economically important plant (and animal) species;
- developing a database of relevant PGR experts and institutions at the state level;
- nominating a national PGR inventory focal person to liaise with international information systems;

- undertaking a national PGR inventory;
- investigating the validity of existing documentation of national PGR; and
- developing a regional PGR network between the Balkan countries, including the establishment of a regional Balkan genebank.

The priority of the recently developed national PGR strategy for BiH is to establish the National SC in order to identify the specific activities for the different regions. To date, there are no national funds available for these activities. However, once a detailed programme of activities and budget has been developed by the BiH SC, a funding proposal will be made to the government through the Council of Ministers.

The proposed National Biodiversity Centre will coordinate both national and regional PGR activities, involving all relevant national institutions, including universities, institutes, centres and laboratories able to participate. For more information, contact the focal point, Prof. Sulejman Redžić (sredzic@pmf.unsa.ba).



*Minuartia bosniaca* endemic plant species (BiH). Photo: Univ. of Sarajevo

## ECP/GR Cereals Network meets for the first time in Armenia

When N.I. Vavilov visited Armenia in the 1930s, he was delighted with the Armenian plant diversity and regarded the site of Erebuni, near Yerevan, as one of the most interesting places in the world for wild wheat. Today, this site is a national reserve, and a visit by the members of the ECP/GR Cereals Network was one of the highlights of this meeting. Representatives from 32 countries, FAO and IPGRI, met in Yerevan, Armenia, 3-5 July 2003 for this first meeting of the Cereals Network, which was officially opened by the Armenian Minister of Agriculture, David Lokyan, and his deputy, Levon Rukhkyan. The meeting involved 36 members of the three Working Groups on *Avena*, Barley and Wheat, and focused on reviewing the groups' activities, preparing workplans and identifying priorities for the future. Thematic issues were also discussed at the Network level.

In the area of documentation, highlights

included a demonstration of the tools and properties of the European *Avena* database, which has been used to identify duplicates conserved in different genebanks. This database is also evolving to incorporate data from Canada and the USA and to provide a model for other databases.

The European Barley Database (EBDB) now includes data for 155 000 accessions from 23 European countries and from three extra-European genebanks. It also includes evaluation results obtained from a recently concluded European Union (EU) funded project. Inter-regional links have also been established for the inclusion of additional data from Australia, Japan, the USA and the International Centre for Agricultural Research in Dry Areas (ICARDA). Documentation of the International Barley Core Collection (BCC) is also being incorporated into the EBDB.

The European Wheat Database now contains

132 000 records, corresponding to 56% of all European wheat accessions. This database has been invited to participate in the Global Inventory of Wheat Genetic Resources developed by the International Center for Maize and Wheat Breeding (CIMMYT).

All the database managers agreed to analyze their databases to define lists of unique accessions conserved in different genebanks. Working Group members and genebank curators, in consultation with appropriate authorities, were encouraged to take responsibility for conservation, according to the terms agreed in the previous meeting of the Network Coordinating Group held in July 2000 in Radzików, Poland. A small group representing the different Working Groups was established to prepare documents for the Network to identify solutions for the common problem of responsibility sharing and safety duplication.



Cereal landraces, Armenia.  
Photo: E. Lipman

Regarding the issue of including characterization and evaluation data into the databases, a general solution must be sought and this problem will be addressed by the Documentation and Information Network, since it is a cross-cutting issue relevant for all crops. The Barley Working Group expressed interest in undertaking a survey of barley workers to investigate the possibility of starting regional cooperation in pre-breeding. Elcio P. Guimarães, from FAO offered to be the focal point and to provide support for this initiative.

On the subject of *in situ* conservation of wild relatives, the *Avena* Working Group recommended that efforts continue to ensure that important sites of *A. magna*, *A. murphyi*, *A. insularis* and *A. macrostachya* are conserved *in situ*. The need to improve information on the distribution of wild relatives in Europe was highlighted, and the European Initiative for the Euro + Med Plant Base was mentioned as an EU-funded project to harmonise the Flora Europaea and the Mediterranean Plant Checklist. The Cereals Network will also contribute to create a list of European crop wild relatives for the EU project «PGR Forum».

Helmut Knüpfner from Germany was elected as the new Chair and Marja Jalli from Finland as the new Vice-Chair for the Barley Working Group. A report of the meeting is under preparation and will be available free of charge from the IPGRI Regional Office for Europe.

## Sixth Meeting of the ECP/GR *Prunus* Working Group

Dr Kenneth Tobutt, Horticulture Research International United Kingdom

The sixth meeting of the ECP/GR *Prunus* Working Group was held 20-21 June, 2003 in Budapest, Hungary at the kind invitation of the Research Institute for Fruit Growing and Ornamentals. Working group members from 19 countries attended, and were joined by participants from Latvia and the EUFORGEN Noble Hardwoods Group.

The meeting began with a review of the Group's recent activities by the current Chair, Françoise Dosba. This included: the joint project on *Prunus* genetic resources with the European Union (EU) (GENRES 61); progress on the European *Prunus* Database; plans for a Decentralized European *Prunus* Collection; and various explanatory posters and presentations.

This was followed by updates on the status of *Prunus* genetic resources in different countries, with presentations from Cyprus, Hungary, Latvia and Serbia and Montenegro, and written submissions from the other countries. A progress report was given on the European *Prunus* Database, managed by Unité de génétique et amélioration des fruits et légumes (INRA), Bordeaux, which is expected to be on-line by the end of 2003. Participants also made minor revisions to the document "Towards a definition and implementation of a decentralized European *Prunus* Collection" which defines the material to be included, sets out a *modus operandi* and establishes the responsibilities of the participating genebanks, the Database Manager, and the ECP/GR Working Group. Subsequent presentations and discussions focused on the use of collections and their relationship with the breeding sector, the phytosanitary framework for exchange of material and the international agreements concerning access to genetic resources.

A stimulating account was given on the activities of EUFORGEN's Noble Hardwoods Group, which included raising public awareness, a database of 'grey' literature and Technical Guidelines, and how these responsibilities are shared by members of the Group. The Noble Hardwoods scope include wild relatives of rosaceous fruit trees including *Prunus avium*, so there is obvious potential for collaboration, such as on the development of phenotypic and molecular descriptors.

The final agenda item concerned funding opportunities from the EU in light of the expected call for proposals. One potential project could be to develop the Decentralized European *Prunus* Collection in collaboration with ECP/GR, focusing on areas such as characterization, phytosanitary status, incorporation of molecular markers and rationalization.

Françoise Dosba stood down as Chair after ten years service and was succeeded by Ken Tobutt, and Daniela Benediková took over as Vice-Chair. A full report of the meeting will be published in 2004.





## Final EPGRIS Conference and ECP/GR Documentation and Information Network meeting



On 11-13 September 2003 the three-year European Union (EU) funded project, European Plant Genetic Resources Information Infra-Structure (EPGRIS) held its final meeting in Prague, Czech Republic, jointly with the ECP/GR Documentation and Information Network. EPGRIS supported the creation of a network of National Inventories in Europe, and provided central access to these National Inventories via a European PGR Web search catalogue (EURISCO) (see box below). This meeting followed the third meeting of PGR Forum (see page 5) held 8-10 September 2003 focusing on the documentation of *in situ* conservation. Approximately 100 European PGR documentation experts met for this special occasion, including 40 European National PGR Inventory Focal Persons, 50 European Central Crop Database (ECCDB) Managers and other documentation experts. The meeting provided an occasion for this unique group of experts to discuss the outcomes of EPGRIS, assess the status of development of the National Inventories, and the impact EURISCO could have on PGR documentation.

In each European country, a National PGR Inventory Focal Person was nominated with the responsibility to coordinate the development of their national PGR inventory and to provide these data to EURISCO.

The agenda of this final meeting included a discussion of the different aspects of compiling National Inventories - such as developing the technical infrastructure for use as a national network; improving access to PGR; and adding value by including specific collections and promoting their use to improve national PGR management. Also highlighted was the role of National Inventories in implementing international agreements and supporting National Programmes in the framework

of the Clearing House Mechanism (CHM) and of the International Treaty on PGRFA.

Significant time was dedicated to discussing EURISCO itself, including the technical aspects of the database software and structure, the uploading mechanism and related standards, and the functional aspects of the Web site. The EPGRIS Focal Persons also provided their feedback and opinions on EURISCO. The complementary nature and interaction of EURISCO with other PGR Documentation networks, and links with the FAO World Information and Early Warning System (WIEWS), the Germplasm Resources Information Network (GRIN), the System-wide Information Network for Genetic Resources (SINGER), and others were also discussed.

The future of EURISCO and the information infra-structure created by EPGRIS was debated, including the potential to extend the scope and sustainability of EURISCO within ECP/GR; the role of the ECCDBs and their managers; and how EURISCO can best serve the users of PGR documentation (breeding and research sector, genebanks, *in situ*/on-farm conservation and

international/regional agreements). EURISCO will need to evolve as new technologies rapidly develop, particularly with regard to Geographical Information Systems (GIS) and data exchange through Extensible Markup Language (XML). Both EPGRIS and EURISCO provide a unique opportunity to rethink the structure of the ECP/GR Documentation and Information Network, and a new approach to future opportunities.

A report is being compiled and will be available in early 2004 on the ECP/GR Web site and in print format from IPGRI. For more information about EURISCO, visit <http://eurisco.ecpgr.org/> or contact the ECP/GR Secretariat at IPGRI.

### EURISCO

The European Plant Genetic Resources Web search catalogue EURISCO provides access to PGR information in Europe and facilitates the location of and access to germplasm material. It is composed of, and updated with, data from the National Inventories of PGR accessions maintained *ex situ*, and is hosted and maintained by IPGRI on behalf of ECP/GR with support from the System-wide Information Network for Genetic Resources (SINGER).

EURISCO was officially made public in September 2003 at the final meeting of the European Plant Genetic Resources Information Infra-Structure (EPGRIS). It currently contains passport information on over 882 000 accessions from 26 European countries, which accounts for only a part of the information available from the European National PGR Inventories. It is anticipated that the catalogue will be completed after the inclusion of more information and the quality of the data improved significantly over the coming months, once EURISCO has undergone thorough testing and made ready for general public access. More information about EURISCO is available at: <http://eurisco.ecpgr.org/>



## New collaboration between genebanks and the private sector

During the ECP/GR Vegetables Network meeting held in May 2003 in Skierniewice, Poland, (see Issue 26), the ECP/GR Secretariat presented a proposal to establish a new mode of collaboration between genebanks and the private sector.

The proposal is in line with the ECP/GR objectives of facilitating the increased use of PGR; encouraging cooperation between stakeholders (including NGOs and private breeders); and the 6th Priority Activity of the Global Plan of Action, which recommends the regeneration of threatened *ex situ* accessions. This initiative will enable the creation of additional links, involving genebanks and plant breeders in both eastern and western Europe.

This will enable the emergency regeneration of vegetable accessions at genebanks and identify breeders available to multiply this genetic material. The ECP/GR Secretariat was designated as the focal point and will coordinate and monitor the overall process. The Secretariat will work with the Vegetables Network representatives to identify

genebanks and the material requiring regeneration and to identify breeders, the material they wish to test, and provide the necessary documentation.

Agreements to ensure implementation of regeneration standards and return of the multiplied material to the genebanks will be established.

A task force from the Vegetables Network is advising and assisting the ECP/GR Secretariat in preparing the agreements, identifying contacts and finalizing the details of the project. Members of the task force include representatives from the Czech Republic, France, Germany, Italy, Poland, Spain, the Nordic Countries and the Netherlands.

A number of private companies in Germany, Italy, Spain, and the Netherlands expressed interest in this initiative. The first genebank to request help was the Institut für Pflanzengenetik und Kulturpflanzenforschung (IPK), Gatersleben in Germany for the propagation of seeds of wild species of *Allium*.

The next steps include completing the list of genebanks/breeders interested in the initiative; identifying the

specific material requiring regeneration; preparing the appropriate agreements, and launching the initiative in time for the next spring planting in 2004. For more information on this initiative please contact Aixa Del Greco ([a.delgreco@cgiar.org](mailto:a.delgreco@cgiar.org)).

## PGR Forum workshop on *in situ* data management methodologies

The European Crop Wild Relative Diversity Assessment and Conservation Forum (PGR Forum) is a Thematic Network funded by the European Commission (EC) Fifth Framework Programme for Energy, Environment and Sustainable Development, as outlined in Issue 26 of this newsletter. It provides a European forum for the assessment of taxonomic and genetic diversity of European crop wild relatives, the development of appropriate conservation methodologies, and the establishment of an information system providing access to European crop wild relative data.

On 8-10 September 2003, a PGR Forum workshop, organized by Zentralstelle für Agrardokumentation und Information (ZADI), Germany, was held at the Research Institute of Crop Production (RICP) in Prague, Czech Republic. This workshop focused on aspects of *in situ* data management methodologies and the development of the information system. A preliminary conceptual model for an information infrastructure for European crop wild relatives (CWR) was proposed. A European CWR taxon database will be at the core of the information infrastructure with links to external data sources. The database of taxonomic and crop data is to include the genus, species, uses, related crops, gene pool/taxon group, and will be curated by the University of Birmingham, UK during the lifespan of PGR Forum. A report is being compiled and will be available on the PGR Forum Web site shortly.

The next PGR Forum workshop on population management and monitoring methodologies will take place 21-25 April 2004 in Minorca, Spain. For more information about PGR Forum, visit [www.pgrforum.org/](http://www.pgrforum.org/) or contact Shelagh Kell ([s.p.kell@bham.ac.uk](mailto:s.p.kell@bham.ac.uk)).



## First meeting of the ECP/GR *Vitis* Working Group

The Working Group (WG) on *Vitis* was established in October 2001, in response to a request made by the coordinator (E. Maul) of the GENRES 081 European Union (EU) funded project on *Vitis*. The creation of this WG enabled the network, established within the EU project, to renew its collaboration and to extend it to countries outside the EU. The WG held its first meeting 12-14 June 2003 in Palić, Serbia and Montenegro, involving representatives from 18 countries, starting off with overviews of their national collections.

Reports on the status of the European *Vitis* Database ([www.genres.de/eccdb/vitis/](http://www.genres.de/eccdb/vitis/)) and the progress made in harmonizing descriptors were given. The addition of passport data of grapevine collections from countries not yet included in the database (especially eastern Europe), and from other regional and departmental collections, was

considered a target future activity, with the aim of completing the inventory of the genetic resources collections in Europe, including hybrids, rootstocks and wild species. Adapting the passport data used in the European *Vitis* Database to the standards adopted by the European Plant Genetic Resources (PGR) web search catalogue EURISCO (based on the FAO/IPGRI Multi-Crop passport descriptors) was also considered important by the WG members. No further description of grapevine varieties is envisaged at the moment regarding the addition of primary and secondary characterization data. Descriptors of the International Union for the Protection of New Varieties of Plants (UPOV), IPGRI/FAO and the Office International de la Vigne et du Vin (OIV) are being reconsidered for further harmonization which will be developed for 2004/2005.

Grapevine variety differentiation and identification is indispensable for enabling reliable research outputs and reliable knowledge for breeding purposes, as well as for the efficient management of grapevine germplasm conservation in genebanks. The WG noted that to detect the existence of synonyms, homonyms or mis-names in grapevine collections, ampelographic characterization must be undertaken using data from Simple Sequence Repeats (Microsatellites) (SSR) markers. Following the standardization work undertaken by the GENRES 081 project, this analysis proved to be a suitable and reliable tool for grapevine variety identification. Therefore, the *Vitis* Working Group members decided to establish an SSR-marker database as part of the European *Vitis* database, recommending that researchers working with *Vitis* SSR marker analysis include, in each SSR marker research, at least the same six microsatellite loci obtained by the GENRES project. This would then allow immediate comparison with the EU project variety identification data. In order to verify the "true type" of the variety, microsatellite data should also be accompanied wherever possible by ampelographic descriptors plus photographic documentation.

The WG also noted that the European Commission (EC) is prioritizing the establishment of a European Catalogue of grapevine varieties, aiming to create an on-line database including all varieties officially accepted for the commercialization of propagated material. It will therefore be necessary to document intra-varietal genetic diversity in order to justifiably oppose possible requests for eliminating standard material in the near future.

The WG expressed deep concern for the ongoing and



Grapevine variety *Tsolikouri* from Georgia. Photo: L. Brancadoro

serious genetic erosion of grapevine variability and clonal diversity. This erosion is caused by: increase of international trade; predominance of a small number of varieties in several countries; predominance of few clones of each single variety; replacement of old vineyards by plantations with modern cultivars; decrease of viticultural surface, especially in those sites particularly rich in biodiversity; and laws restricting the use of traditional varieties for planting and marketing. Considering the critical situation in some wine growing countries, the *Vitis* WG concluded that extra support is needed for safeguarding the remaining grapevine diversity and recommended that each country should maintain its own traditional varieties in national or regional ampelographic collections and protect *Vitis vinifera* ssp. *sylvestris* in situ. Each country should strive to preserve the clonal variability, through the identification of old vineyards, prospecting and collecting of clones representing the widest intra-varietal variability. Depending on specific cultivar variability and history, up to 200-500 clones per variety are considered necessary for the establishment of clonal conservatories.

Jesús Ortiz from Spain and Edi Maletic from Croatia, were selected by the Group as respectively Chair and Vice-Chair. A report of the meeting will be published and available free of charge from the IPGRI Regional Office for Europe.

## IPGRI Fellowship on *Vitis*

David Maghradze from the Georgian Research Institute of Horticulture, Viticulture and Oenology began his ten-month IPGRI funded fellowship on 1 September 2003 at the University of Milan, Italy. Within the framework of the international research project, "Conservation and sustainable use of grapevine (*Vitis vinifera* L.) genetic resources in the Caucasus and the Northern Black Sea regions", the fellowship is being supervised by Prof A. Scienza and Dr O. Failla in the Dipartimento di Produzione Vegetale.

According to the Scientific Collaboration Programme of the University of Milan, the general aim of this fellowship is to transfer basic knowledge to increase the *Vitis* research capacity in Georgia.

The research on 150 Georgian *Vitis* varieties will include:

- Modern techniques for characterization of varieties based on the FAO/IPGRI Multi-Crop passport Descriptors and completion of ampelographical cards;
- Chemical analyses of grape samples, including chemo-taxonomical analyses of berry skins and defining the anthocyanic (glycoside pigment) profile of varieties on the basis of High Performance Liquid Chromatography (HPLC) for phylogenetic comparison;
- DNA molecular techniques to detect genetic variation in these genetic resources, specifically Amplified Fragments Length Polymorphism (AFLP) and Simple Sequence Repeats (Microsatellites) (SSR) markers. The data from these investigations will be used for fingerprinting and ampelographical characterization of the Georgian varieties.

The research will also include visits to the major viticultural regions, research organizations and nurseries in Italy for training throughout the period of study. The work being undertaken as part of this fellowship will contribute significantly to the success of the international project in the Caucasus region of which it is a part.



## Follow-up on the EU GENRES CT96-088 and other collaborative maize projects



*Diversity for ear shape and kernel color in maize populations and hybrids. Author: Ph. Noël, INRA*

Based on an initiative of Jean-Pierre Monod, President of the French Association pour l'Etude et l'Amélioration du Maïs (Pro-Maïs) of maize breeders, a «post-project encounter» was organized 12-13 June 2003 to report back on results obtained from the following projects on the diversity of maize populations:

- **EU GENRES CT96-088 project «Implementation of the European network for evaluation, conservation and utilisation of European maize landraces genetic resources».**

Coordinated by Jacques Dallard from the Institut National de la Recherche Agronomique (INRA), Mauguio, France, the project period of 1997-2001 was extended to March 2002 to allow the completion of experiments. Project partners included seven European countries represented by nine institutions: INRA, Mauguio, France; Center for Genetic Resources (CGN), the Netherlands; Centro de Investigación Agraria de Mabegondo (CIAM), Spain; Consejo Superior de Investigaciones Científicas (CSIC), Spain; Istituto Sperimentale per la Cerealcoltura (ISC), Italy;

National Agricultural Research Foundation (NAGREF), Greece; Institut für Pflanzengenetik und Kulturpflanzenforschung (IPK), Germany; Banco Português de Germoplasma Vegetal (BPGV), Portugal; and Pro-Maïs, France.

- **Flint maize populations diversity**

This project involved the Pro-Maïs and INRA laboratories, from 1997-2002 and was coordinated by Alain Charcosset from INRA-Le Moulon, France.

- **Heterotic patterns between French and Spanish maize landraces**

Coordinated by Rosana Malvar from CSIC-Pontevedra, Spain and Armand Boyat from INRA-Mauguio, France, this project was undertaken during 2000-2001 within the framework of the Picasso bilateral cooperation.

This post-project encounter took place at INRA in Montpellier, France, bringing together more than 60 participants. All project partners were represented except IPK and CGN, and representatives also attended from INRA, the Bureau des Ressources Génétiques (BRG) and other local scientific institutions.

This initiative of making the project results available to stakeholders and donors was warmly welcome by the invited European Commission (EC) representative, Freddy Steenhoff (Agriculture Directorate-General). It also provided the project partners with an opportunity to discuss future related activities. Presentations given by the project partners included:

- An overview of the inventory, description and classification of the genetic diversity of European maize landraces, including the European maize landraces database (EUMLDB) available online at [www.montpellier.inra.fr/gap/resgen88](http://www.montpellier.inra.fr/gap/resgen88) and [www.montpellier.inra.fr/gap/resgen88/BD/Eumldb.zip](http://www.montpellier.inra.fr/gap/resgen88/BD/Eumldb.zip) and the structure of the genetic variability using different descriptors.
- Identification of a European maize landraces representative collection (EUMLRC) and a European maize landraces core collection (EUMLCC) using different descriptors.
- Evaluation of the European core collection via evaluation of forage maize for digestibility and best harvesting time; quantitative evaluation for grain quality; resistance to European corn borer and to pink stem borer; tolerance to low nitrogen level; and screening for drought resistance.
- Historical aspects of maize were outlined by the use of DNA pooling to assess diversity and its application in the investigation of maize introduction in Europe, allowing the comparison of European and American maize diversity, providing insights on the origin of European maize.

- Evaluation of heterosis among French and Spanish populations of the EUMLCC.

Issues of general interest were also addressed, both at the national level by representatives of the BRG providing an overview of PGR activities in France, and at the international level by the EC representative on the status and perspectives of Plant Genetic Resources (PGR) in the European Union. Discussions also touched on crucial aspects related to PGR management and conservation, including international policies and regulations such as intellectual property rights, the International Treaty on PGRFA, and links to international organizations.

This two-day encounter was considered extremely fruitful, having fully met its objectives to share the results of the GENRES and other collaborative projects and to stimulate new links between the project partners and other stakeholders. It was also a learning process on the methodology of dynamic conservation and evaluation of maize genetic resources. The wide diversity of this crop calls for continuous selection and the results obtained within the projects will serve as the basis for further activities in this field.

A CD containing all the abstracts, presentations and related information from this meeting will be distributed to all participants and will also be available upon request at a cost of 15 euros. For more information please contact Armand Boyat ([Armand.Boyat@ensam.inra.fr](mailto:Armand.Boyat@ensam.inra.fr)) or Jacques Dallard ([Jacques.Dallard@ensam.inra.fr](mailto:Jacques.Dallard@ensam.inra.fr))

## Launch of a grapevine conservation initiative

In July 2003, the Georgian Institute of Horticulture, Viticulture and Winemaking planted a new grapevine (*Vitis vinifera* L.) conservation collection in its Vashlidjvari experimental field near Tbilisi. This new collection includes 230 traditional varieties (ten plants of each) originating from threatened collections around the country, including Dighomi, Mukhrani and Telavi. The survey and characterization of the varieties was undertaken, and part of the material was regenerated in close collaboration with the University of Milan, Italy. At the same time, David Maghradze, the scientist responsible for the genetic resources from the Georgian Institute, began his ten-month fellowship at the University of Milan (See page 7).

Establishing this conservation collection in Vashlidjvari was completed as part of the pilot phase of the three-year project "Conservation and sustainable

use of grapevine genetic resources in the Caucasus and Northern Black Sea Region". The main goal of this initiative is to strengthen the national capacity in the countries of the region to ensure the long-term maintenance of *Vitis* genetic resources, including both the cultivated traditional varieties and the wild resources. In particular, the activities aim at identifying, collecting, characterizing and conserving the rich diversity of grapevine genetic resources throughout the Caucasus and the northern Black Sea region, as a basis to improve local viticulture and wine making industry.

The exact number of traditional local varieties occurring in the region is uncertain, but is estimated to be in the range of 600-1500. Despite the high level of local grapevine diversity, very few cultivars are cultivated in this region, and there is instead a tendency towards planting

foreign material which is much less suited to the local environmental conditions.

Prior to the breakup of the USSR, the agricultural policy aimed at standardizing production with homogeneous industrial varieties. Although this policy did not favour the maintenance of grapevine diversity, local varieties continued to be grown in a number of small farms. A network of genetic resources collections also operated, ensuring the conservation of the genetic material. This situation has rapidly deteriorated in recent years, since the degenerating socio-economic situation of the rural population has caused many vineyards to be abandoned.

Wine production, founded on knowledge-based use of genetic resources and on sustainable viticultural practices, provides a major potential source of income for the local population in the low-income transition countries of the Caucasus and the northern Black Sea region. This region is considered to be a primary centre for the domestication of grapevine, and these resources are of significant relevance to the Mediterranean basin and for the development of the European modern cultivars. The wild species, *Vitis vinifera* ssp. *sylvestris*, the supposed ancestor of the cultivated grapevine, still occurs throughout this region.

At the end of October 2003, 11 participants from the six countries of the region (Armenia, Azerbaijan, Georgia, Moldova, Russia and Ukraine) met for the first time in Tbilisi, Georgia. This meeting was an important milestone for planning common strategies and to define priorities and the mode of operation during the next three years. The participants nominated focal persons and main partners in each country, identified priorities, and developed a joint workplan with shared tasks. These include:



Grapevine variety *Rkatsiteli Vartisperi* from Georgia. Photo: L. Brancadoro

conservation activities (see Box); training and scientific exchange; information, documentation and communication; and genetic identification research.

The three-year project, coordinated by IPGRI, includes partners from all six countries in the region and will receive financial support for the agreed workplan from the Government of Luxembourg. Contributions "in kind" have also been offered by various institutions across Europe.

In the late 1800s, the European wine industry was afflicted by *Phylloxera*, an insect that almost completely destroyed European viticulture. Crop improvement and particularly resistance to pests and diseases, are crucial issues in viticulture. Conserving wild or traditional local material is particularly important as it contains genetic information responsible for natural resistance to major pests and diseases affecting grapevine production. As a main wine-producer, Europe has a common responsibility for the conservation of grapevine genetic resources in its old "home", from which cultivation spread into the world.

For more information on this project visit [www.ipgri.cgiar.org/regions/europe](http://www.ipgri.cgiar.org/regions/europe)

## Conservation activities

### Mobilization of genetic resources

- study of sources of material (traditional varieties and wild grapevine)
- inventory of the distribution area (use of geographic information system)
- collecting missions (joint collecting missions and collecting material in each country)
- documentation of collecting site information
- exchange of genetic material between countries (re-introduction of varieties)

### Conservation measures

- establishment of 2-3 collections in different ecogeographic locations/countries
- micropropagation, clean-up if needed, virus identification; cryopreservation of particularly valuable genotypes
- conservation of wild grapevine (*in situ* measures seeking adequate policy and legal support from national authorities; complementary *ex situ* measures for threatened forms; introduction into breeding programmes; research into levels and patterns of genetic variation; monitoring)
- exchange of experience on intellectual property protection with other European countries

### Documentation and characterization

- adoption of common information standards for compilation of databases (wild grapevine, landraces, traditional varieties and breeding varieties)
- characterization of the germplasm using IPGRI descriptors
- devote 10% of the germplasm for research purposes
- study of seeds of traditional varieties (archaeo-botanical research)



## New *in situ* and on-farm conservation in Central Asia

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N. I. Vavilov himself highlighted Central Asia as the region richest in species and intra-specific diversity, and as one of the five most important centres of origin of cultivated plants. Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan are rich in highly variable domesticated crops and landraces with unique characteristics. Popular species in these countries include almond, apple, apricot, fig, grape, peach, pear, pistachio, plum and pomegranate. Many valuable landraces and old local cultivars of cherry, peach, persimmon, pomegranate and quince are still maintained in home gardens and on small farms.

Farmers in this region have conserved landraces and local varieties since crop cultivation began. Growing a mixture of

diverse local materials, farmers would select varieties adapted to the local environmental conditions. However, the introduction of new, uniform cultivars, the use of chemical fertilizers, and increased mechanization have reduced the area of local cultivars grown. This has

also caused traditional diversity-based farming systems to disappear, the degradation of arable lands, and the pollution of the environment.

Fortunately, some landraces and traditional cultivars can still be found in isolated and marginal areas, such as mountains and oases where they are considered integral components of these farming systems. Many wild fruit species are also still found in forest areas and are valuable genetic resources for food crops due to their resistance to insects, disease and their adaptation to the wild. The role of farming communities is central to *in situ* and on-farm conservation. Local cultivars are passed from generation to generation of farmers and are

subject to different selection pressures, including farmers' selection.

The five Central Asian countries are working in collaboration with IPGRI to identify options for conserving horticultural crops and their wild relatives through a regional project on "*In Situ*/On-Farm Conservation of Agricultural Biodiversity (Horticultural Crops and Wild Fruit Species) in Central Asia". The aim of this proposed five-year project is to equip farmers, institutes and local communities with the knowledge, methodologies and policies to enable the *in situ*/on-farm conservation of globally significant horticultural crops and wild fruit species in Central Asia. The project focuses on traditional local varieties of fruit crops maintained by farmers and their wild relatives growing in forests, and on the enhancement of farmers' and community capacities to conserve *in situ* horticulture diversity. In order to achieve this purpose the project will:

- Develop and ensure support for farmers and local communities in conserving *in situ*/on-farm local varieties of fruit crops and wild relatives;
- Strengthen and make available the knowledge and methodologies on *in situ* conservation of fruit crops and forest wild fruit species;
- Establish broad participation and partnerships/links between farmers, institutions, and countries; and
- Build capacity at local, regional, and national levels and support *in situ*/on-farm conservation of fruit genetic resources.

The project involves consulting a wide range of stakeholders, including farmers and Non-Governmental Organizations (NGOs), academics, national agricultural and forestry research institutions, and local

and national decision-makers. Grants to develop this project proposal are being provided by the Global Environment Facility (GEF) through the United Nations Environment Program (UNEP). The first Project Development Phase (PDF A) was successfully completed at the end of 2001, and PDF B (16 months) will be completed in April 2004. Additional funding is being sought to ensure the successful and effective implementation of the project and to complement the existing support of the GEF.

Outputs of PDF A are being evaluated and tested during the second phase of the project (PDF B) - such as: the criteria for crop priority setting; identifying priority agroecosystems/ecological zones; selection of pilot sites; assessment of training needs; refining the logical framework of the project; and the proposed implementation of the project. Local communities are being involved in the project and in agrobiodiversity conservation efforts by establishing multidisciplinary committees at each pilot site. A regional tool to assess the levels of diversity and distribution for *in situ*/on-farm management of priority species has also been developed and tested at the pilot sites. Testing and evaluation of this survey tool has enabled valuable feedback to be incorporated.

Three meetings of the International Steering Committee and two national workshops in each country were organized to refine the project and the countries' components and feedback from stakeholders incorporated. The project proposal for implementation over the next three to five years will be submitted to UNEP-GEF Secretariat in mid March 2004 once the second phase (PDF B) is complete. For more information please, contact Shirin Karryeva (skarryeva@cgiar.org).



Pomegranates in Central Asia.  
Photo: IPGRI-CWANA

## Conference on collective action and property rights: CAPRI

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The sixth annual workshop on "Collective Action and Property Rights initiative" (CAPRI) was held 29 September - 2 October 2003 at IPGRI in Rome, Italy. A total of 44 participants from around the world came to present papers, discuss problematic issues, and to learn from colleagues with training and experience in a myriad of fields. The aim of this conference was to bring together agricultural economists, geneticists, plant breeders, ecologists, and social scientists into a rich, multidisciplinary discussion forum, tackling property rights and collective action that underpin the conservation and use of Plant Genetic Resources (PGR).

CAPRI is a System-wide Genetic Resources Programme (SGRP) of the Consultative Group on International Agricultural Research (CGIAR). It aims to identify and assess the effectiveness of multi-level organizational and institutional collective action and property rights, and to examine the internal and external influences which may alter or endanger their effectiveness. Collective action may be defined as *"action taken by a group...in pursuit of members' perceived*

*interests,"* Marshall, 1998. The nature of collective action and how institutions govern access to a particular stream of benefits (through property rights), strongly influence the way in which people use resources. In turn, the nature of resource management directly affects production systems. By disseminating its research across a wide range of public and private sectors, CAPRI can contribute to policies and practices aimed at alleviating rural poverty. CAPRI has six priority research themes including: the role of environmental risk; genetic resources; changing market relationships; and technology adoption.

The Conference was organized by the International Food Policy Research Institute (IFPRI) in association with IPGRI. The four days were divided into morning presentations/discussion of papers and the afternoons were dedicated to working groups exploring approaches to: policy-making; institutional issues; local conservation; and research methodologies associated with collective action and property rights and the ways that these influence efficiency, equity, and

*"[it] presented a nice range of perspectives, from Hodgkin's review of IPGRI projects, to Mexico and Uzbekistan case studies, to the specifics of NGO and government efforts in Ethiopia and the Philippines. While there were a range of perspectives on what type of collective action or property rights these entailed, it was great to see a consolidation of current work in this area."*  
Eric Van Dusen of Berkeley University, farmer seed systems specialist

sustainability of resources. Since the conference was hosted at IPGRI, emphasis was placed on PGR, although many participants had experience in watershed and land resource management. Participants examined the issue of farmers' (and lack thereof) and breeders' intellectual property rights and questioned the dynamic and contrasting definitions of collective action and ownership.

The different degrees of PGR management range from international regulations such as the Convention on Biological Diversity (CBD) and the International Union for the Protection of New Varieties of Plants (UPOV), to national policies, legal pluralism at the community levels, and the personal interests of individuals. These needs demand that scientists develop research approaches integrated across user groups, resources, time, and agro-ecological landscapes. Successful policy making to promote the conservation of resources and the improvement of livelihoods must be sensitized to collective action and property rights that promote a multiplicity of production systems valuing genetic diversity.

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## AGORA - A global partnership assisting developing countries

Access to Global Online Research in Agriculture (AGORA) is an initiative to provide free or low-cost access to major scientific journals in agriculture and related biological, environmental and social sciences to public institutions in developing countries. Launched in October 2003, led by FAO, the goal of AGORA is to increase the quality and effectiveness of agricultural research, education and training in low-income countries, and in turn, to improve food security. Researchers, policy-makers, educators, students, technical workers and extension specialists will have access to high-quality, relevant and timely agricultural information via the Internet.

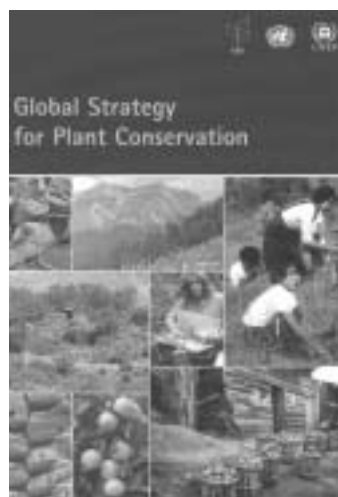
Blackwell Publishing, CABI Publishing, Elsevier, Kluwer Academic Publishers, Lippincott, Williams & Wilkins, Nature Publishing Group, Oxford University Press, Springer-Verlag, and John Wiley & Sons are the founding partners of AGORA, providing access to over 400 of their journals.

For institutions in most countries where the annual per capita GNP is US\$1000 or less access to AGORA is likely to be free. Special conditions may apply in a small number of cases, where institutions in some countries will not be eligible for some or all of the content.

Participating institutions will require computers connected to the Internet with a connection of 56k baud rate or higher. The system is designed to work best with Internet Explorer version 4.0 or higher, or Netscape version 6 or higher. Users will also need an Adobe Acrobat viewer for journal articles in PDF format. For more information please visit [www.aginternetwork.org](http://www.aginternetwork.org) or email [agora@fao.org](mailto:agora@fao.org) for further details.

## Update on implementing the Global Strategy for Plant Conservation

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The Conference of the Parties (COP) of the Convention on Biological Diversity (CBD) adopted a Global Strategy for Plant Conservation (GSPC) at its 6<sup>th</sup> meeting in the Hague in 2002 (Decision VI/9). This strategy calls for concerted actions to halt the current and continuing loss of plant diversity by providing a framework to facilitate harmony between existing initiatives aimed at plant conservation, which is in line with targets agreed at the World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa in 2002. The key element of this strategy is that it includes 16 outcome-oriented targets to be achieved by 2010. These targets are divided into five groups dealing with: understanding and documenting plant diversity; conserving plant diversity; sustainable uses of plant diversity; promoting education and awareness; and building capacity.

At the request of the COP, the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the CBD established a mechanism to develop ways and means, within the Convention's thematic and cross-cutting programmes of work, to promote the further development and implementation of the GSPC, and to monitor and assess progress. A group of experts were invited by the CBD to form a liaison group to provide additional guidance on implementing and monitoring the strategy. This group first met in Cartagena, Colombia in October 2002, organized in collaboration with Botanic Gardens Conservation International (BGCI) and supported by HSBC through its "Investing in Nature" partnership. This meeting reviewed and considered the need to develop sub-targets, milestones and indicators for

each of the 16 targets, as well as baseline data for monitoring. It also proposed that the CBD designate lead institutions to support and facilitate the further development of each target, by holding stakeholder consultations for all the targets except for targets 3 (models), 14 (education and awareness), 15 (capacity building) and 16 (networks) which are considered as cross-cutting targets. The group met again in Dingle Co. Kerry, Ireland in October 2003 to review the progress made by lead institutions on the stakeholder consultations. For a progress update, visit the CBD Web site ([www.biodiv.org/doc/meeting.asp?mtg=TEMPC-02](http://www.biodiv.org/doc/meeting.asp?mtg=TEMPC-02))

IPGRI was invited by the CBD to facilitate five of the 16 targets. Facilitation of Target 8 is being undertaken by IPGRI in collaboration with BGCI, which is to ensure "60% of threatened plant species in accessible ex situ collections, preferably in the country of origin, and 10% of them included in recovery and restoration programmes". The other four targets involving IPGRI are being facilitated through collaboration with FAO, specifically:

- Target 6 "At least 30% of production lands managed consistent with the conservation of plant diversity",
- Target 9 "70% of production lands managed consistent with the conservation of plant diversity",
- Target 12 "30% of plant based products derived from sources that are sustainably managed" and
- Target 13 "The decline of plant resources and associated local and indigenous knowledge innovations and practices that support sustainable livelihoods, local food

security and health care, halted". People and Plants International are also involved in this collaboration.

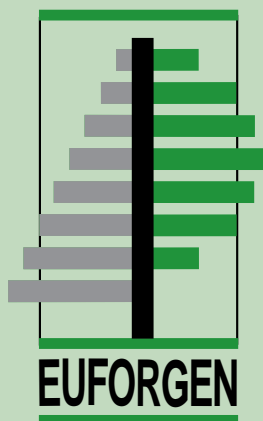
FAO and IPGRI have initiated the process for developing a background paper for each of these targets through electronic stakeholder consultations which are available on the CBD web site. To contribute, please send your inputs to Ehsan Dulloo at IPGRI ([e.dulloo@cgiar.org](mailto:e.dulloo@cgiar.org)) or to Linda Collette at FAO ([linda.collette@fao.org](mailto:linda.collette@fao.org)).

The remaining targets are being facilitated by other organizations such as the International Union for the Conservation of Nature (IUCN), World Conservation Union, World Conservation Monitoring Centre, *Planta Europa*, Plant life, CITES etc.

Of particular relevance to Europe, and closely linked to the GSPC, is the development of the European Strategy for Plant Conservation (UNEP/CBD/COP/6/INF/22), which was developed at the third *Planta Europa* European conference on the conservation of wild plants held in June 2001 in the Czech Republic. The strategy includes regional targets to be achieved by 2007, which may be adapted to harmonize with the 2010 targets of the GSPC. Designated lead organizations are working to achieve these targets, which are facilitating and monitoring progress at a regional level. IPGRI is involved as a contributing organization in several of the EPCS targets related to the conservation of genetic diversity, *ex situ* conservation and wild crop relatives.



## Fourth meeting of the EUFORGEN Conifers Network



The fourth meeting of the EUFORGEN Conifers Network was organized in Pitlochry, Scotland, 18-20 October 2003. Participants from 26 countries focused on the issue of conserving and using exotic conifer species in Europe, and kicked off with presentations highlighting the experiences of the UK and other European countries.

In a number of countries with low native forest cover, such as Iceland, Ireland and the UK, exotic conifers have a special role not only in forestry, but also in protecting the

environment by preventing soil erosion and facilitating the recovery of native vegetation - a fact not always recognized in the debate on exotic species. Despite the obvious mistakes made in cultivating exotics (i.e. planting on unsuitable sites), the use of non-native material needs to be considered as an acceptable option under clearly defined conditions, such as impoverished dendroflora.

The meeting participants concluded that the cultivation of exotics may have certain ecological and genetic consequences which require

careful monitoring. In some species, disease and pest problems only develop after a considerable time lag, and may be difficult to eradicate due to the lack of natural control. Furthermore, analyses of second-generation performance of some introduced tree species show that adaptation to new environmental conditions can be relatively fast and, consequently, the gene pool can change significantly even within one generation. This swift adaptation may lead to the emergence of landraces, and such locally adapted genetic material should be conserved by appropriate methods. It was also recommended that the conservation of exotic tree species should be incorporated in both national programmes on forest genetic resources and pan-European efforts.

The summary report of the meeting is available through the EUFORGEN website. The next meeting will be held in Cyprus in spring 2005, provided that the Conifers Network will continue in its present form during Phase III of EUFORGEN.

## New MCPFE Work Programme adopted

Following the Fourth Ministerial Conference on the Protection of Forests in Europe (MCPFE), an Expert Level Meeting was held 16-17 October 2003 in Vienna, Austria. Representatives from 34 countries, the European Commission and several international organizations exchanged views on the outputs of the Vienna Ministerial Conference held in April and intensively discussed a draft work programme for the implementation of the five Vienna Resolutions (see Issue 26 page 5). Several additions were made to the draft work programme before it was adopted at the end of the meeting.

Under Resolution 4 on forest biological diversity, forest genetic resources were added as an independent focus area. This is inline with one of the specific commitments made by the Vienna Conference, i.e. to promote the conservation of forest genetic resources as an integral part of sustainable forest management and to continue pan-European collaboration in this area. In practice, European countries will be implementing this commitment by continuing their active collaboration on forest genetic resources within the EUFORGEN Programme. More information on the MCPFE Work Programme can be found at [www.mcpfe.org](http://www.mcpfe.org).



## Nordic cooperation on forest genetic resources

The five Nordic countries (Denmark, Finland, Iceland, Norway and Sweden) have cooperated on various fields of interest for decades. In the 1990s, several discussions focused on increasing collaboration on the conservation of forest genetic resources amongst the countries. One of the ideas proposed was to establish a genebank for forest genetic resources, similar to the Nordic Gene Bank in Alnarp, Sweden for crops and farm animals. However, this suggestion was not considered as a feasible option due to the large investment required, as well as the fact that forest genetic resources conservation involves conserving living trees in their natural sites and environments (*in situ*) more than *ex situ* conservation in genebanks.

In the early 2000s, the Nordic countries agreed that a network on forest genetic resources, under the umbrella of the Nordic Council of Forest Reproductive Material (NSFP), would be a more feasible option. This idea was also included in the Strategy for Conservation of Genetic Resources in the Nordic Region 2001-2004. In March 2003, the NSFP included the establishment of this network into its work programme for 2003-2006. Entitled the 'Nordic Network for Forest Tree Gene Conservation', this network will promote the importance of forest tree gene resources among policy-makers, forestry professionals and the general public in the Nordic countries.

Operational gene conservation work is another area in which this new network will facilitate Nordic cooperation. Instead of trying to harmonize approaches used for gene conservation, the focus will be upon learning from the successes and failures in planning and implementing national activities in the region. Despite the many commonalities of the five countries, there are differences in their forestry which have resulted in very different gene conservation strategies.

The first meeting of the Nordic Network for Forest Tree Gene Conservation took place 1-2 September 2003 in Finland to develop future activities. All five countries were represented and IPGRI was also invited to provide an update from the pan-European perspective. One of the first activities will be to develop a web site to disseminate relevant information. It was also agreed that the first concrete product will be a folder of maps on the *in situ* conservation areas of Norway spruce, larch and birch in the Nordic countries. The next meeting will be held in Iceland in August 2004.

For further information, please contact the Network Coordinator Leena Yrjänä at the Finnish Forest Research Institute ([leena.yrjana@metla.fi](mailto:leena.yrjana@metla.fi)) or the Chair Lennart Ackzell at the Swedish National Board on Forestry ([lennart.ackzell@svo.se](mailto:lennart.ackzell@svo.se)).



## Second International Elm Conference

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Elms (*Ulmus* spp.) are an important element of the landscape from a conservation, heritage and amenity point of view. Since the beginning of the 20<sup>th</sup> century, elm forests have been afflicted by Dutch Elm Disease (DED) caused by *Ophiostoma ulmi* and *O. novo-ulmi*, as well as habitat destruction and other human activities. Thus, conservation measures are essential to prevent the further deterioration of elm forests.

Over the past 20 years, the Spanish Ministry of Environment (DGCN) has been supporting the Universidad Politécnica de Madrid to conduct research on "Conservation and breeding of elms against DED". The objectives are to conserve the widest possible variety of native elms, and to obtain resistant individuals by crossings with *Ulmus pumila*, an elm species that is tolerant to the disease. Currently, 70 genotypes, mainly *U. pumila* x *U. minor*, including some *U. minor*, have been selected for their tolerance to *O. novo-ulmi* inoculations. In 1997, a five-year European Union (EU) project (RESGEN 78) was

initiated to coordinate the conservation of the elm genetic resources of nine European countries. Coordinated by Cemagref in France, it involves 14 institutes and a diverse group of scientists and foresters. Progress made during this project is available at [www.cemagref.fr/Informations/Recherche/milieu/projetgeneticresources/index.htm](http://www.cemagref.fr/Informations/Recherche/milieu/projetgeneticresources/index.htm).

From 20-23 May 2003, the "Second International Elm Conference" was held in Valsain, Spain. The Conference presented the results of both the Spanish and European projects and enabled the exchange of information on well-established and new methods of saving the remaining elms. Experts from around the world presented current research on the ecology, conservation, biotechnology, breeding, pests and diseases of elms. The objectives and topics discussed followed those presented at the 1<sup>st</sup> International Elm Conference held in Chicago in 1998, including: building a dialogue between researchers and practitioners; providing information on elm conservation

and management; developing ideas for elm improvement; and involving local communities in elm research and conservation.

A total of 94 participants from 19 countries (Austria, Belgium, Bulgaria, Canada, China, France, Germany, Greece, India, Iran, Italy, Portugal, Romania, Serbia and Montenegro, Spain, Sweden, the Netherlands, the UK, and the USA) attended the Conference which included 30 oral and 35 poster presentations. A number of conclusions were reached, such as the new elm pathogens that are evolving through hybridization among *Ophiostoma* sp. strains in central Europe and North America. Molecular markers have provided powerful insights into the ecology and evolution of elms and their pathogens. Along with adaptive traits, these molecular markers have generated useful information to guide management of gene conservation programmes. Breeding for DED resistance has produced good results, and the efforts must continue to obtain higher genetic variability and improved resistance to bark beetles and other pests. Genetic modification provides novel approaches to develop resistant elms, but before this is routine, further research and testing, clear control strategies and ethical debate are needed.

A special issue of *Investigación Agraria. Serie Sistemas y Recursos Forestales* is currently under preparation and will be freely available at [www.inia.es/gcont/publicaciones/index.jsp?intranet=0&idcategoria=304](http://www.inia.es/gcont/publicaciones/index.jsp?intranet=0&idcategoria=304). For further information on the Conference presentations or on any other aspects of elm breeding and conservation, please contact Luis Gil ([lgil@montes.upm.es](mailto:lgil@montes.upm.es)) or Alejandro Solla ([asolla@unex.es](mailto:asolla@unex.es)).



## EUFORGEN Technical Guidelines

The second set of Technical Guidelines for genetic conservation and use was published in November 2003, to add to those published earlier in the year for noble hardwoods and conifers (see Issue 26 page 5). This new set of Technical Guidelines includes:

- European white elm (*Ulmus laevis*)
- wild apple and pear (*Malus sylvestris* and *Pyrus pyraeaster*)
- oriental sweet gum (*Liquidambar orientalis*)
- chestnut (*Castanea sativa*)
- silver fir (*Abies alba*)
- lime (*Tilia* spp.)
- black poplar (*Populus nigra*)
- Scots pine (*Pinus sylvestris*)



The Guidelines are based on the available knowledge of the species and on widely accepted methods for the conservation of forest genetic resources. The objective is to provide recommendations for long-term conservation in Europe as a commonly agreed basis to be complemented and further developed in local and national conditions. As part of the Technical Guidelines, the EUFORGEN Networks have also developed distribution maps for the above-mentioned species. The maps provide updated information on the occurrence of the species, and thus facilitate the development and implementation of pan-European gene conservation strategies.

A third set of Technical Guidelines will be published in early 2004. To request copies please contact the EUFORGEN secretariat ([euf\\_secretariat@cgiar.org](mailto:euf_secretariat@cgiar.org)) or download electronic copies (PDFs) from [www.euforgen.org](http://www.euforgen.org), where a full list of the completed Technical Guidelines is available. The maps are also available through the web site both as image files (JPEG format) and as shape files, which can be used by most Geographic Information System (GIS) software. Free GIS software (DIVA-GIS) is also available on the Web site.

## External Review of IPGRI's activities in Europe

IPGRI is the only centre of the Consultative Group on International Agricultural Research (CGIAR) with a regional mandate in Europe to facilitate collaborative work with European Plant Genetic Resources (PGR) of importance outside of the region. To evaluate the impact of IPGRI's activities in this region during the past five years, and to identify priority areas for future activities, the Centre Commissioned External Review (CCER) of IPGRI's regional programme for Europe was undertaken in September 2003. Every programme of IPGRI, either regional or thematic, is reviewed periodically once every four years. This provides important feedback to IPGRI's Board of Trustees (BOT), who then evaluate recommendations given by the external reviewers (CCER Panel), endorse and monitor their implementation. Outcomes of this CCER review were on the agenda of the most recent BOT meeting in Yerevan, Armenia, in September 2003.

The CCER panel consisted of Peter M.A. Tigerstedt, University of Helsinki, Finland and Ivana Dulić-Marković, Federal Ministry for Agriculture, Serbia and Montenegro, who were also joined by Renato Salazar, a member of the IPGRI BOT. The panel visited national PGR programmes in the Ukraine and the Russian Federation to obtain insights into the current collaborative activities and to review the impact of IPGRI's work in the region. In addition to intensive interaction between the panel and staff at IPGRI's offices and FAO in Rome, a survey of PGR stakeholders across Europe was also conducted by IPGRI prior to the review (see Box p.15).

The CCER panel highlighted the balanced and distinctively pan-European approach taken by IPGRI in the region. During the past five years, IPGRI has incorporated

low, medium and high-income countries in its networks, while paying particular attention to the less developed national programmes in the region. The level of integration between agriculture and forestry, especially with respect to the two "flagship" networking programmes (ECP/GR and EUFORGEN), was also acknowledged. Other conclusions and recommendations of the CCER panel include:

- Increased attention should be given to the balance between PGR conservation and use.
- The CCER called for stronger collaboration with Non Governmental Organizations (NGOs), the private sector, local communities and botanical gardens.
- It was also recommended that increased support be provided to national programmes on PGR policy, particularly in East European countries. Synergies between the development of European Union (EU) policies on PGR and other countries in pan-Europe should also be encouraged through the sharing of views between countries.
- With publications representing a significant outcome and investment of IPGRI's activities in the region, the CCER recommended that all documents should be produced in simple English, and European countries should be encouraged to translate publications at their own expense. Cost-sharing between IPGRI and relevant countries may be justified to facilitate speed and quality of translations in some cases.

- It was also recommended that IPGRI engage more actively in raising public awareness, especially in western Europe, to increase overall support for PGR activities in Europe and elsewhere.
- Efforts to promote cooperation between the European networks and other regions, as well as with other Regional Groups need to be continued and increased.
- The ECP/GR and EUFORGEN Coordinators were specifically recommended to encourage discussion with the respective Steering Committees in the following areas:
  - To explore possibilities for distributing publications with narrow interest to specialist groups/or with a short shelf-life in an electronic format only, thus freeing more resources for general public awareness publications;
  - To prioritize indigenous forest genetic resources species in the case of EUFORGEN; and
- To prioritize and support national PGR inventories in the European crop germplasm search catalogue EURISCO (see page 4).
- IPGRI needs to remain particularly sensitive to the process of integration of East European countries with the EU due to the considerable repercussions of EU support to collaborative activities involving national PGR programmes. A more in-depth assessment of the needs and options will be continued as part of the strategic IPGRI planning exercise that commenced in 2003 (see Box below).

In conclusion, IPGRI has proven to be an honest and trustful broker for networks, projects, research and scientist training throughout Europe.

## Developing an IPGRI's vision for the future

IPGRI has recently initiated discussions both internally and with the wide range of our partners and stakeholders, on the basis for our work in the future. The discussion on our vision and future strategy is based on a few premises:

- People are at the centre of our interest.
- Agricultural biological diversity in the broadest sense, including forestry, fish, microbes, pollinators, is our overall context of operation.
- Our «honest broker» and networking/partnership building *modus operandi* is our preferred way of doing business.

The Regional Office for Europe ([ipgri-europe@cgiar.org](mailto:ipgri-europe@cgiar.org)) welcomes feedback and input from our readers, both looking at the "big picture" (our vision) and for determining the steps needed to get there (our strategy) in the area of Plant Genetic Resources worldwide in the next 10-15 years.

Various groups of stakeholders and partners will be contacted with request for more specific feedback in the coming months.



## Update on the Global Crop Diversity Trust



The initiative to set up the Global Crop Diversity Trust, initially known as the Global Conservation Trust (see Issue 26 page 13), is being undertaken by an 11-member Interim Panel of Eminent Experts. The Panel was established in February 2003 and met twice during the year. The Interim Secretariat for the Trust, housed at FAO in Rome from September 2003, is led by former IPGRI Director General Geoff Hawtin. Both FAO and IPGRI continue to provide a wide range of expertise, services and support to the work of the Panel and the Trust initiative generally.

Consultations with a wide range of stakeholders were undertaken in the period prior to the Panel's second meeting (2-4 October 2003), to gather views from developed and developing countries, donors and other partners on the most appropriate governance for the Trust. At this second meeting, the Panel approved the

Constitution of the Trust, the Agreement to establish the Trust as an independent international fund, and the Relationship with the Governing Body of the International Treaty. The Directors General of FAO and IPGRI have been requested to send these instruments to governments, inviting them to sign or to accede to the Establishment Agreement.

As of early November 2003, the Trust had received US\$40 million in pledges and a further US\$52 million in expressed commitments. The target set for the end of 2003 was US\$100 million. It is hoped that the Trust will be in a position to begin awarding funds to eligible collections in mid-2004. The process to develop principles and criteria for identifying collections that are eligible to receive funding from the Trust is now also underway. For more information visit <http://startwithaseed.org>.

## Impact of IPGRI's work in Europe – summary of a stakeholder survey

In May 2003, a survey was conducted to receive feedback on the key elements of IPGRI's work in Europe. The survey was sent to 1572 significant partners and stakeholders included in the mailing list of the Regional Office for Europe.

Of the 35% that responded to the survey: 42% work for government research institutes; 36% for universities and genebanks; and the remainder are employed in the private sector or by Non Governmental Organizations (NGOs). Key conclusions of the survey include:

- Most respondents have received IPGRI publications in the past five years, and find them useful. The FAO/IPGRI Multi-crop Descriptors received the highest rating on the ECP/GR website, and the Technical Guidelines on the EUFORGEN website.
- 73.8% of the genebank employee respondents have provided data to the ECP/GR European Central Crop databases and 75.4% accessed data from these databases. For 20% of these respondents, the databases are their primary source of PGR data.
- About 40% of respondents are members of ECP/GR, and 20% are members of EUFORGEN. Both ECP/GR and EUFORGEN were thought to be very effective in coordinating communication among network members and organizing network activities. Both programmes rated slightly lower in effectiveness in mobilizing knowledge, skills and resources to respond to the needs of their members.
- Over 90% of respondents rated IPGRI's contribution to increasing the availability of PGR information to be positive, especially among forestry and agriculture professionals. However, 39% of respondents reported that IPGRI has made no contribution to increasing awareness among the general public.
- 35% of respondents have no knowledge of IPGRI training materials and 28% reported that IPGRI has not contributed to capacity building and training.

When asked to rate the importance of services in terms of the importance to their organization in the next five years, the majority of respondents rated the following services as essential: (i) developing strategies for PGR conservation, management and use; (ii) fund raising; (iii) providing information and data about PGR; and (iv) supporting PGR networking. Public awareness, organizing collaborative research projects and increasing contacts with researchers in other countries were also identified as critically important for those involved in PGR.

A full report of this survey is available from IPGRI's Regional Office for Europe ([j.turok@cgiar.org](mailto:j.turok@cgiar.org))





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## Forthcoming Meeting

11-16 May 2004  
Improvement and  
Silviculture of Beech  
IUFRO 7th Beech  
Symposium and Field Tour  
in Iran  
Teheran, Iran  
[psalehi@rifr-ac.ir](mailto:psalehi@rifr-ac.ir) or  
[psalehi2@yahoo.com](mailto:psalehi2@yahoo.com)  
[www.rifr-ac.ir/beechmeeting](http://www.rifr-ac.ir/beechmeeting)

27 June – 2 July 2004  
1st World Congress on

Agroforestry: Working  
together for sustainable  
land-use systems  
Orlando, Florida, USA  
[www.conference.ifas.ufl.edu/  
wca](http://www.conference.ifas.ufl.edu/wca)

18-22 August 2004  
9th International  
Symposium on Buckwheat  
Prague, Czech Republic  
[isb2004@vurv.cz](mailto:isb2004@vurv.cz)  
[www.vurv.cz/buckwheat](http://www.vurv.cz/buckwheat)

8-11 September 2004  
XVII EUCARPIA General  
Congress Genetic variation  
for plant breeding  
Tulln, Austria  
[eucarpia17@ifa-tulln.ac.at](mailto:eucarpia17@ifa-tulln.ac.at)  
[www.eucarpia.org/eucarpia17](http://www.eucarpia.org/eucarpia17)

## Call for fellowship applications on grapevine genetic resources

IPGRI Regional Office for Europe is pleased to announce three research fellowships for 2004 at the Centre de Recherche Public Gabriel Lippmann in Luxembourg. These fellowships are offered to outstanding young scientists from Armenia, Azerbaijan, Georgia, Moldova, the Russian Federation and the Ukraine on a competitive basis. Selected fellows will be invited to develop a research plan for three months, with a possible extension.

The fellowships will cover the following areas:

- (a) micropropagation, clean-up methods, virus identification, cryopreservation;
- (b) research into levels and patterns of genetic variation; and
- (c) genetic identification.

For more information, application deadlines and selection requirements, please visit:  
[www.ipgri.cgiar.org/regions/europe/home.htm](http://www.ipgri.cgiar.org/regions/europe/home.htm)



### Obituary

We regret to announce that Mr Fabrizio Grassi, from the Istituto di Frutticoltura, Ciampino, Rome, Italy, recently passed away after a period of illness. Fabrizio worked in close collaboration with IPGRI for many years. He was well-known to many ECP/GR partners, representing Italy in the ECP/GR Steering Committee meetings and was a particularly active member of the *Prunus* and *Malus/Pyrus* Working Groups and a National Inventory focal person. We wish to convey our condolences and words of encouragement and strength to Fabrizio's family and friends at this difficult time.