

newsletter

for Europe

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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 29 by **15 October 2004**.

EUFORGEN Phase III (2005-2009) endorsed

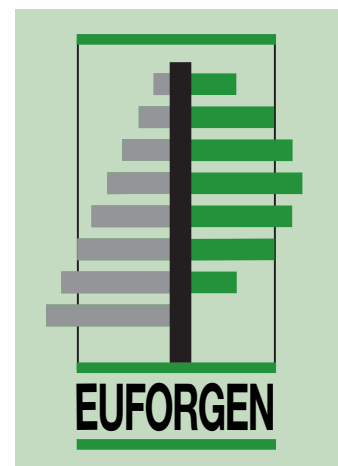
National Coordinators and Focal Persons from 30 countries participated in the fourth Steering Committee meeting of the European Forest Genetic Resources Programme (EUFORGEN), held in Židlochovice, Czech Republic on 26–29 May 2004. During a first-day seminar, representatives from the European Commission's Directorate General for Agriculture, the Liaison Unit Warsaw of the Ministerial Conference on the Protection of Forests in Europe (MCPFE), the European Forest Institute (EFI) and the Food and Agriculture Organization of the United Nations (FAO) addressed forest biological diversity and sustainable forest management in Europe. The meeting reviewed the progress made during Phase II and endorsed a continuation of the Programme to Phase III. Currently 32 countries participate in EUFORGEN, providing financial and technical support to the Programme. Through EUFORGEN, member countries have been implementing their commitment to conserve forest genetic resources (FGR) in Europe. The Programme has facilitated international collaboration and produced outputs such as gene conservation strategies and technical guidelines for genetic conservation and use (targeted at practical forest managers). Recently, the Programme has also initiated development of common action plans, which aim at sharing of responsibilities for conservation of forest genetic resources in Europe.

During the new Phase, EUFORGEN will continue to

operate under the MCPFE framework and contribute to the implementation of relevant resolutions. The Programme will strengthen its efforts to promote practical implementation of gene conservation and appropriate use of genetic resources as an integral part of sustainable forest management. The Programme will also continue to facilitate further development of methods to conserve genetic diversity of European forests.

The Steering Committee opted for reorganization of the EUFORGEN structure, merging the current five species Networks into three for Phase III (conifers, broadleaved tree species with scattered occurrence and broadleaves with continuous occurrence). As a response to the outputs of the MCPFE process, it was agreed that new thematic structures should be established, in addition to the species Networks, namely Forest Management Network and Information Working Group. Through these thematic arrangements, EUFORGEN will promote implementation of recommendations presented in the technical guidelines and support integration of gene conservation issues into national forest programmes and policies. Furthermore, the Programme will focus on developing protocols to evaluate genetic consequences of different management practices and identify genetically appropriate management practices in collaboration with forest managers and policy makers.

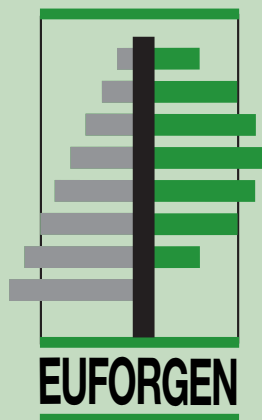
The Steering Committee also discussed the new Council Regulation on genetic



resources in agriculture (EC No. 870/2004) and a Community programme to support relevant work in the EU Member States based on this regulation (see p.4 in this issue). Actions on FGR have been identified as one of the eligible areas for new projects and the Steering Committee asked IPGRI to coordinate development of a joint project proposal benefiting all EUFORGEN Networks. The proposed project will establish a Web-based system for national inventories on gene conservation units of forest tree species in Europe and collect relevant information for a database. IPGRI was requested to explore ways to engage non-EU countries in the planned activities as distribution ranges and gene-ecological zones of forest trees do not respect national borders.

The outputs of the Steering Committee meeting will be reported to the MCPFE process during an Expert Level meeting in Warsaw, Poland on 14–15 October 2004. The new Network structure for both thematic and species-oriented activities for Phase III will also be developed by the end of 2004.

Seventh Noble Hardwoods Network meeting



The Istituto Sperimentale per la Selvicoltura (ISSA) hosted the seventh meeting of the EUFORGEN Noble Hardwoods Network in Arezzo, Italy on 22-24 April 2004. The excellent local arrangements were carried out in collaboration with the Forest Department (Corpo Forestale dello Stato) of the Italian Ministry of Agricultural and Forest Policies. The Network members from 27 countries discussed the progress made and exchanged ideas on the future activities of EUFORGEN.

The Network has produced Technical Guidelines for genetic conservation and use of several noble hardwood species. During the meeting, the Network agreed to finalize the remaining Guidelines for common maple (*Acer campestre*), Italian alder (*Alnus cordata*), walnut (*Juglans regia*) and wild service tree (*Sorbus torminalis*). These will be developed and published by the end of 2004.

The meeting also discussed sharing of responsibilities in gene conservation at pan-European level. Similarly to other EUFORGEN Networks, the Noble Hardwoods Network has been developing a concept of a common action



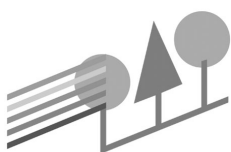
Field trip to mixed noble hardwoods plantations, Valdarno, Italy.
Photo: J. Koskela

plan using Norway maple (*Acer platanoides*) as a pilot species. This concept aims at strengthening conservation of forest genetic resources in Europe by collecting and making information available in the already existing gene conservation units (mainly *in situ* stands) established for different tree species in various countries. Subsequently, national level efforts on gene conservation will benefit from increased availability of pan-European information and their practical implementation can be carried out more efficiently and effectively. The meeting agreed that there is a need to develop a common criteria

and minimum requirements for gene conservation units in closer collaboration with other EUFORGEN Networks.

As part of the meeting, the local organizers presented their work on conserving genetic resources of noble hardwood species, in particular their use in land rehabilitation after mining activities. The participants also visited experimental tree plantations created using a mixture of various noble hardwoods and the local organizers shared with them the practical experiences in managing the plantations. A summary meeting report is available on the EUFORGEN Web site (www.euforgen.org).

Ecosystem approach and sustainable forest management



The Liaison Unit Warsaw of the Ministerial Conference on the Protection of Forests in Europe (MCPFE) and the Joint Secretariat of the Pan European Biological and Landscape Diversity Strategy (PEBLDS) organized an *ad hoc* meeting on ecosystem approach and sustainable forest management in Kraków, Poland on 19-21 April 2004. The purpose of the meeting was to analyze the complementarity of the two concepts in the European context and to develop pan-European understanding on their linkages.

Participants from 23 countries, the European Commission and eight international organizations welcomed the recognition by the Convention on Biological Diversity (CBD) that sustainable forest management can be considered a means of applying the ecosystem approach to forests. The meeting concluded that, although the two concepts have different starting points, there are no major gaps between them. They both promote conservation and management practices which are environmentally, socially and economically sustainable, and which generate and maintain benefits for both present and future generations.

There are, however, certain areas in which further work is needed. These include 1) better cross-sectoral integration and inter-sectoral collaboration, 2) interactions between forests and other biome or habitat types within a landscape, and 3) management of biodiversity as part of sustainable forest management.

The MCPFE Liaison Unit Warsaw reported the conclusions of the meeting to the United Nations Forum on Forests for further discussion during its fourth session in Geneva, Switzerland on 3-14 May 2004. Further details can be found at www.mcpfe.org and www.un.org/esa/forests/index.html

CASCADE project on European chestnut (*Castanea sativa*)

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Castanea sativa. Photo:
M. Idzajt, EUFORGEN Noble
Hardwoods Network

European chestnut is grown extensively for its fruit and wood and is important not only for rural diversification, local economies and cultures, but also for its contribution to the landscape and environment. The species is threatened across Europe by human activities and by the ravages of fungal attacks such as *Phytophthora* spp. causing ink disease. European chestnut was therefore proposed as a model species for the development of long-term strategies combining conservation of evolutionary and adaptive potential, exploitation of breeding stocks and preservation of Mediterranean landscapes.

CASCADE (EVK2-CT-1999-00006) was a four year (2000 to 2004) EU project, funded within the Fifth Framework Programme. It involved scientists from 11 research institutions in five European countries covering areas such as ecology, ecophysiology, pathology, molecular genetics, population genetics, quantitative genetics, gene conservation,

tree breeding, environmental economics and forest management. The main objective of the project was to develop a strategy for long-term gene conservation and management of European chestnut. For this purpose, genetic diversity among different populations, breeding zones and socio-economic issues were studied.

For genetic studies, 82 populations were selected from UK, France, Greece, Italy and Spain according to different domestication levels, i.e. major management regimes (naturalized stands, coppices, fruit orchards) and covering a broad range of xerothermic indices. A fairly large amount of genetic variation was found among populations and the effective number of alleles decreased from southern Europe toward north and west.

Three main genepools were detected: (a) the genepool in northeastern Turkey, thought to be the likely centre of diffusion of the species; (b) a genepool located in Greece in a region so far uninvestigated; (c) the

genepool in Mediterranean Turkey, from where the European pools seem to derive. Therefore populations from these regions should be considered both as targets for conservation of genetic resources and sources of useful variation for breeding.

Six field experiments were established, providing a good starting point for continued studies of growth, phenology and stem form. Development of a saturated map and identification of QTLs was also a great achievement.

Significant variability in *Phytophthora cambivora* susceptibility was observed between populations.

A diffusion map of *P. cambivora* and the distribution of associated *Phytophthora* species was developed and the effect of site on *Phytophthora* distribution and diffusion potential was shown.

Forest tree gene conservation methods should be dynamic so that species can benefit from natural or artificial selection and thereby adapt to their environmental conditions. The *Multiple Population Breeding System* (MPBS) is a method that fulfils the criterion for dynamic gene conservation by allowing for adaptation under changes in environment, while allowing breeders to respond swiftly to possible changes in the value of different characters. Based on this concept and the project results, separate MPBS gene conservation programmes are proposed for wood and nut production. Within the project, the concepts of *additive trait conservation values* (ATCV), *pathogen tolerance conservation values* (PTCV), and *marker trait conservation values* (MTCV) were also developed.

Further information is available through the CASCADE Web site: <http://soi.cnr.it/~chestnut> or by contacting the authors.

Assessing forest genetic resources in the Ukraine

Roman Volosyanchuk, Laboratory of Forest Tree Breeding, Ukrainian Research Institute of Forestry and Forest Melioration (URIFFM), Kharkiv, Ukraine

The project, funded by the Government of Luxembourg and coordinated by IPGRI, aims to support the development of national programmes on plant genetic resources in southeastern Europe. It has so far provided support for activities on research, conservation and use (for tree improvement) of forest genetic resources in four selected countries of the region: Bulgaria, Moldova, Romania and Ukraine. Since 2003, the project has also included grapevine (*Vitis vinifera*) genetic resources in the Caucasus and northern Black Sea. Strong emphasis is placed on capacity building in the region, information and communication, and strengthening links between the institutions involved and their European counterparts.

The Ukraine continues to implement the forest genetic resources strategy developed in 2000-2001. The activities are closely linked to those of the EUFORGEN Programme, encompassing *in situ* conservation of genetic diversity of native trees, further development and use of *ex situ* conservation technologies, as well as genetically sustainable forest management.

Activities being carried out within the framework of the project include: a comprehensive inventory of broadleaved genetic reserves and other *in situ* gene conservation units within the Ukraine; genetic feasibility studies of *Fagus* spp.; complementary genetic studies of *Populus nigra* and *Quercus petraea* / *pubescens* populations using microsatellite and cpDNA analysis; and micropropagation of threatened oak trees. A collection of the most endangered genotypes is also being established. Maps of natural distribution of *Fagus sylvatica* and *Quercus petraea*, as well as a map of *Q. pubescens* natural distribution range have also been compiled.

The data from eco-geographical inventories have been prepared for inclusion in existing EUFORGEN databases and will be made available on the Internet (Web site: www.ipgri.cgiar.org/regions/europe/Projects/SE-Europe/default.asp).

European Union adopts new policy agreements on genetic resources



Spring 2004 in the European Union (EU) will not only be remembered for the accession of ten new Member States, but also for several policy developments regarding genetic resources that are certainly worth noting. By the end of March 2004, 11 Member States (Czech Republic, Denmark, Germany, Greece, Estonia, Finland, Ireland, Luxembourg, Spain, Sweden and United Kingdom) and the European Commission deposited instruments of ratification of the International Treaty on Plant Genetic Resources for Food and Agriculture with the Food and Agriculture Organization of the UN (FAO) in Rome. This brought the total number of countries ratifying the Treaty to more than 40, thus allowing it to enter into force on 29 June 2004.

Another important development is the adoption by the European Council (Agriculture and Fisheries) of the Regulation establishing a second EU programme on the conservation, characterization, collection and utilization of genetic resources in agriculture. The proposal was adopted as Council Regulation EC 870/2004 on 26 April 2004. This important policy tool has been long awaited by the genetic resources community, since the previous Regulation (EC 1467/94) ended in 2000 (see NL 26, June 2003).

The main objectives of the new programme are to contribute to a sustainable agriculture; facilitate international coordination and complement and promote actions at national level. Key words are “complementarity” with other ongoing activities in the area of genetic resources (especially rural development and research framework programme activities – see Box), and “conformity” with

activities in seed marketing and trade (see box p.4).

The programme covers a period of three years (2004-2006) with a total budget amounting to €10 million. As expected, its scope includes plant, animal and microbial genetic resources.

According to the Commission, each project is expected to have up to ten participants and an average budget of €0.5 million, with no explicit ceiling per project funded from this budget. The best proposals will be selected through an evaluation process by independent experts. The first call for proposals will cover all areas of the Regulation and will be published soon. A second call will follow in 2006, focused on areas for which no projects were funded in the first call.

Collaboration with the pan-European networks on genetic resources, such as ECP/GR and EUFORGEN, will need to be formalized with their existing Steering Committees, according to sources from the Commission.

Because the EU policies on genetic resources have been fragmented and the past measures often perceived as lacking coherence, the recent agreements are to be seen as promising developments. It is hoped that the European Commission will substantially increase its financial support for genetic resources work to meet its commitments, both in Europe and outside. The latest policy developments in the larger EU represent an important impetus for strengthening collaborative work on genetic resources.

Call for 6th research framework project

According to the Commission, the third call of the Sixth Framework Programme (FP6) for research is expected to be published in June 2004. An integrated research project with relevance to genetic resources in terrestrial ecosystems will very likely be funded in this third and last call. The budget of a successful integrated project will be up to €15 million. Further information and announcements are available at: www.cordis.lu

Achievements of the EU GENRES project on *Brassica*

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The EU GENRES CT99 109-112 project "*Brassica* Collections for Broadening Agricultural Use, including Characterising and Utilising genetic variation in *Brassica carinata* for its exploitation as an oilseed crop" was carried out from 2000 to 2003 and was co-financed by the European Commission under the Council Regulation (EC) No 1467/94. Sixteen partners from eight European countries participated in the project, of which ten partners maintain collections of these *Brassica* species, three conduct research and three are involved in breeding.

The project activities were conducted by four subgroups, aimed at conserving, documenting, characterizing, evaluating and rationalizing European collections of following *Brassica* species:

- *B. oleracea* - Cole crops, e.g. kales, cabbages, cauliflower, broccoli, kohlrabi, couve tronchuda, Brussels sprouts;
- *B. rapa* - turnip and turnip rapeseed;
- *B. napus* - rapeseed or colza and swedes;
- *B. carinata* - Abyssinian mustard.

The project was complementary to the activities of the ECP/GR Working Group on *Brassica*. The European *Brassica* Database (Bras-EDB) focuses on passport data of *Brassica* collections maintained

in European countries. It was updated twice in the four year project period. The updated 2004 version includes 36 collections of 22 countries and contains more than 19 600 accessions and will be on-line searchable on the Internet in mid 2004.

Each of the four subgroups developed a core collection, respectively: *B. oleracea* (395 accessions); *B. napus* (150); *B. rapa* (100); *B. carinata* (80). All the accessions are tagged in the Bras-EDB. The cores and other parts of the collections were characterized for the minimum sets of descriptors. Part of the *B. carinata* collection was characterized using DNA fingerprinting. The project regenerated 889 accessions.

As a result of the project, *Brassica* collections in the majority of European genebanks have been safety-duplicated to other locations.

All subgroups identified gaps in the respective four *Brassica* species. This information will help to fill the gaps in the existing *Brassica* collections.

The results of the project have been disseminated through a workshop, publications and the presentation of the Bras-EDB on the Internet. Short communications will be published in the *Cruciferae* Newsletter of 2004 (see www.cgn.wur.nl/pgr/).



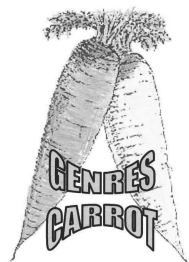
Wild *Brassica* sp.
Photo: L. Maggioni, IPGRI

Impact of the project

The project has brought together European scientists involved in the conservation and utilization of PGR of the most important *Brassica* species. The genebank partners already cooperate in the ECP/GR Working Group on *Brassica*. However, private breeding companies from Germany and the Netherlands, universities and institutes from Italy, Spain and UK were also involved, particularly in the evaluation of the *Brassica* collections. This guarantees future use of *Brassica* germplasm in the development of new varieties for European agriculture.

The enormous improvement of the Bras-EDB, with an addition of more than 6500 accessions, allows optimal access of the European *Brassica* collections to potential users. This specific crop database is rather unique and the linkage of the evaluation and characterization results of this GENRES project makes the Bras-EDB even more useful for future research.

The future of European carrot: a project to conserve, characterize, evaluate and collect carrot and wild species



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The GENRES Carrot project GENRES-CT99-105 (2000-03) involved eight EU partners in six countries including the Nordic Gene Bank, plus the participation of Poland, supported by ECP/GR. Details of the partners and the project are available at www.hri.ac.uk/gru/gen_res/genres.htm

The achievements of the project can be highlighted in specific areas:

- The carrot/*Daucus* Inventory was made available via the project Internet Web site as a downloadable file and on-line searchable.
- A total of 1045 accessions were characterized for a set of minimum descriptors, plus partners captured digital images. The characterization data are on the project Web pages to provide access for potential users.
- A total of 347 accessions were regenerated and the
- seed conserved in long-term storage.
- Molecular markers were used to identify presumed duplicates of yellow-rooted cultivars from a number of European collections. The results will be published in Biodiversity and Conservation.
- More than 60 accessions were screened against three root rot diseases, *Sclerotinia*, Crater rot and Liquorice rot by the Nordic Gene Bank.
- Two partners (BAZ & INH) evaluated more than 360 accessions for resistance to *Alternaria dauci*. A number of accessions were detected which expressed a stronger resistance (5-20%) than the tolerant standard 'Bolero', and are potential sources of resistance alleles.
- DiSTA, NGB & POLSKV evaluated more than 240

accessions for root quality and nutritional characters including carotenoids, sugars and nitrate. Large differences between accessions were found for all characters.

- The Greek Gene Bank carried out a very successful collecting mission for wild *Daucus* taxa on Crete.

All areas of the project have been successful. We hope the results of the work will form the basis for ongoing genetic resources work and research projects to promote the production, diversification in horticulture and the consumption of carrot. The project highlights the need for further research on the genetic structure of the carrot/*Daucus* gene pool in order to improve utilization of the material and to enhance the efficiency of conservation.

PGR Documentation project preparatory meeting

A joint meeting of the EURISCO Advisory Group and the ECP/GR Documentation and Information Network Coordinating Group was held at the Centre for Genetic Resources (CGN) in Wageningen, the Netherlands, on 5 March 2004 to prepare a documentation project document to be submitted for funding under the expected new European Council Regulation on genetic resources (see p.4 in this issue).

The two ECP/GR bodies convened for this meeting were considered the most appropriate to reach a consensus on collaborative actions of importance for the region and of benefit to the entire PGR documentation community in Europe.

The following areas of desirable development were identified: 1) Improvement of data flow within countries between the original data providers and the National Inventories; 2) Furthering integration between EURISCO and European Central Crop Databases (ECCDBs); 3) Sustaining funding support to EURISCO and related activities; 4) Improved definition of roles and responsibilities with particular emphasis on ECCDB managers and EURISCO Focal points; 5) Improved data standards for EURISCO; 6) Upgrading existing technologies; and 7) Improved downloading functionality from EURISCO.

The meeting agreed on the priority to design a sound information flow strategy that builds on the existing EURISCO model. It was agreed that all data from a national level would need, at least initially, to transit through the National Inventory acting as the responsible unit. It was also recommended to establish a more flexible data flow mechanism that would handle not only passport data but also characterization and evaluation data relevant to the ECCDBs. This approach would allow the ECCDBs to strengthen their updating mechanism through the existing EURISCO infrastructure. Integrating both ECCDBs and EURISCO into a coherent data flow mechanism would require: 1) Commitment of data providers; 2) Reinforcement of the ECCDB managers (crop experts) and National Focal Points in charge of the National Inventories and 3) Improvement of existing data standards, to meet the additional needs of the ECCDB.

The following four 'phases' were considered the building blocks of the future proposal: Data standardization, Data schemas, Infrastructure upgrade and Capacity building. Within these phases, the proposal would be structured in four areas: Data exchange, EURISCO/ECCDBs, Visualization, Data quality and taxonomy and Pilot crop portals. The next steps of this process will take place in the coming months with the identification of a project coordinator and project partners, and the development of a detailed project proposal.



Fourth PGR Forum workshop takes place in Menorca, Spain

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The European Crop Wild Relative Diversity Assessment and Conservation Forum, also called the PGR Forum, held its fourth workshop in Mahon, Menorca, Spain on 21-25 April 2004 on the theme "Population Management Methodologies", bringing together 34 expert scientists from within and outside the PGR Forum project partners. The workshop aimed to discuss the formulation of population management and monitoring methodologies appropriate for the *in situ* genetic conservation of European crop wild relatives. Nigel Maxted (University of Birmingham, UK) gave an overview of genetic reserve conservation of crop wild relatives. In the first session on population management methodologies, an introductory lecture was given by Ehsan Dulloo (IPGRI) on the subject and Francois Lefèvre (INRA, France) and Lothar Frese (BAZ, Braunschweig, Germany) provided perspectives on black poplar (*Populus nigra*) and wild *Beta* species respectively. In the second session on monitoring methodologies, José Iriondo (Universidad Politécnica de Madrid) gave a presentation on demographic and



Endemic Menorcan cow breed. Photo: E. Dulloo, IPGRI

ecological monitoring principles while Xavier Picó spoke about sampling and data treatment. Maria Pohjamo of the University of Helsinki explained procedures for genetic monitoring. In the final session, species and habitat recovery techniques were discussed. E. Laguna of Generalitat Valenciana gave a very interesting presentation on efforts to conserve species and restore habitats in the Valencia region, involving a large network of

microreserves, many of which are privately owned. Session discussions were held in several working groups and recommendations were made. The major outcome of the meeting was that participants agreed to work on a set of guidelines on population management methods, management plans, monitoring procedures and species and habitat recovery plans, based on the information generated at the meeting. At the end of the meeting, Craig Hilton-Taylor and Caroline Pollock of the Red List Programme of IUCN, conducted a training workshop on the use of IUCN Red list categories and criteria for red listing. This included a hands-on practical session where participants assessed the conservation status of a number of crop wild relative species. A field trip was also organized to a community reserve where Menorcan fruit varieties are being restored, as well as to a private farm specializing in organic cheese making from an endemic Menorcan cow breed.



Organic cheese from Menorca. Photo: E. Dulloo, IPGRI

AEGIS project for a European Genebank Integration System



Assuming that conservation and continuing use of existing crop genetic diversity in Europe can better be achieved as a regional effort, rather than on the national level, the AEGIS project, funded by ECP/GR for two years (2004-2005), intends to promote the establishment of a European Genebank Integration System, starting with a feasibility study. Guiding principles are the long-term conservation, high quality of and easy access to genetic material, the avoidance of duplication of conservation efforts and making better use of existing but dispersed capacities and capabilities. The expected output is a set of recommendations, based on the analysis of organizational, structural, technical, legal and financial aspects. At the end of the project, the recommendations will be submitted to the attention of the ECP/GR Steering Committee for endorsement and further implementation.

The AEGIS Steering Committee, which is

responsible for the strategical oversight of the project, met for the first time at IPGRI in Rome on 1 March 2004. The Committee, chaired by Eva Thörn, is composed of a number of individuals selected on the basis of their personal expertise, plus the representatives of the European Commission, European PGR Non Governmental Organizations, European Seed Association, Food and Agriculture Organization of the United Nations (FAO), International Plant Genetic Resources Institute (IPGRI) and the ECP/GR Secretariat (*ex officio*). A Project manager, hired by IPGRI, will coordinate the implementation of the following activities, together with project partners from several European countries: 1) Propose models for the European Genebank Integration system; 2) Propose suitable organizational structures and institutional relationships for these models; 3) Identify legal elements to be considered when developing



Photo: S. Ivanovska, Macedonia (FYR)

the system; 4) Analyze the concept of Most Original Samples and indicate the best way to identify the material to be included in the system, using the central crop databases as a tool; 5) Compile draft guidelines on the necessary scientific and technical standards to be met by the European Collections to ensure long-term conservation and easy access.

A draft cooperation agreement will be prepared, to be signed by institutions that would be part of the European Genebank System and would hold European Collections. The project will focus on the following model crops: *Allium*, *Avena*, *Brassica* and *Prunus*. These represent a diverse group of crops that are likely to require different conservation approaches, depending on their biological characters and the current conservation status in the region.

The intention is to create a fully integrated conservation system in Europe, involving all the important stakeholders involved in germplasm conservation and related services. The project will also seek collaboration with all relevant regional/global initiatives (ECP/GR, South East European Development Network - SEEDNet, Global Crop Diversity Trust, EU Regulation, etc.).

Further information and the project document can be found on the AEGIS Web site at: www.ecpgr.cgiar.org/AEGIS/AEGIS.htm

SEEDNet meeting in Skopje

Eva Thörn, Swedish Biodiversity Centre, Alnarp, Sweden

The Regional Interim Committee (RIC) of the newly established South East European Development Network (SEEDNet), financed by the Swedish International Development Cooperation Agency (Sida), met with Sida representatives for a final preparatory project meeting in Skopje, Macedonia (FYR), 5 – 6 April 2004.

The Swedish Biodiversity Centre (CBM) and focal institutions in Albania, Bosnia and Herzegovina, Croatia, Macedonia (FYR), Montenegro, Kosovo, Serbia, and Slovenia will sign an agreement on the implementation of the SEEDNet sub regional PGR programme, due to start on 1 July 2004.

Lorenzo Maggioni, ECP/GR Coordinator, participated in the meeting and conveyed IPGRI's interest to collaborate with SEEDNet, as well as his personal view of the key role SEEDNet could play in ongoing and future ECP/GR activities. SEEDNet's main objective is to contribute to the long-term conservation and sustainable utilization of PGR diversity within the region, through a well coordinated network of national programmes. Sub-regional crop working groups will be established and enabled to carry out various activities of common interest. Genebanks will be established or restored, collections inventoried, material and information collected, education and training provided.

The Network will be overseen by a Regional Steering Committee (RSC) represented by all the project partners, as well as the ECP/GR Secretariat that was offered *ex officio* membership of the RSC. The first RSC meeting is planned for the beginning of July 2004 in Banja Luka (Bosnia & Herzegovina). This will be the starting point for a number of activities that will hopefully be initiated during the second half of 2004.

Recent development of the International Flax Database as the result of an ECP/GR initiative

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AGRITEC, Research, Breeding
and Services Ltd.
Sumperk
Czech Republic

The International Flax Database (IFDB) was established as an initiative of the FAO/SCORENA Flax and Other Bast Plants Network (FOBPN) in 1993 and managed in AGRITEC Ltd, Sumperk, in order to set up the standardized system of description, characterization and evaluation of flax genetic resources in Europe. Initially the IFDB contained 1416 accessions, 1047 of which European. However, the total European genepool is estimated at approximately 25 000 accessions (Maggioni

et al., compilers. 2002. Flax Genetic Resources in Europe. *Ad hoc* meeting, 7-8 December 2001, Prague, Czech Republic. IPGRI), meaning that the IFDB then only included approximately 4% of European flax genetic resources.

Cooperation between FAO/SCORENA and the IPGRI Networks began in the framework of the Industrial Crops and Potato Network activities planned and carried

out within Phase VI of ECP/GR (1999-2003). The first collaborative initiative took place in Bury St. Edmunds, United Kingdom in September 1999 with the aim of:

- preventing genetic erosion within flax collections as a possible result of decreasing flax acreage in Europe during the previous 10 years;
- identifying the European countries maintaining flax collections and quantify the extent of the holdings;
- to bring together the curators of the most important holdings to initiate cooperation for the conservation of flax genetic resources.

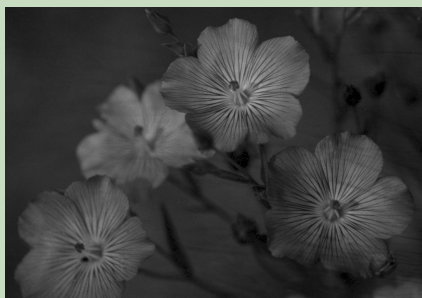
As a result of this meeting, an ECP/GR *ad hoc* meeting of the representatives of European flax collections on flax genetic resources took place in Prague on 7-8 December 2001, with the participation of Bulgaria, Czech Republic, Germany, Hungary, Netherlands, Poland, Romania, Russia and Ukraine. The following materials and conclusions were adopted: a list of FAO/IPGRI Multicrop

passport descriptors (MCPDs); to transfer as much passport data as possible of the individual European genebanks into the IFDB according to the MCPDs.

Partly as a result of small funds made available through ECP/GR, from December 2001 to 31 March 2004 passport data was received from the genebanks of ten European countries (Bulgaria, Germany, Hungary, Latvia, Netherlands, Poland, Portugal, Romania, Russia and Ukraine), resulting in an increase in size (8387 accessions) and quality of the International Flax Database.

All passport data received need to be adjusted and harmonized with the contemporary structure of IFDB and thereafter combined into one database, including the passport data from the previous IFDB managed as dbf. format. Original data will be adjusted to the new Access format of the IFDB by the Database manager and uploaded to the Internet in order to be available on-line.

A detailed analysis of the IFDB was made according to the plant type and to the respective passport descriptors included, resulting in the identification of duplicate groups. Structure according to the plant type: fibre (47%), linseed (10%), combined type (6%), others (1%), not specified (36%); and Identification of duplicate groups: Unique (37%), duplicates – multiplies (63%). It should be noted that these data only include part of the Bulgarian collection (453 accessions) received in February 2004 and evaluated by the IFDB manager according to the IFDB descriptors. The full Bulgarian collection contains a total of 928 accessions, which will be included in the detailed IFDB analysis after the complete set of data has been received.



Flax flowers (*Linum usitatissimum* L.).
Photo: M. Pavelek

Flax and allied fibre plants for human welfare

Nina Brutch, N.I.Vavilov Research Institute of Plant Industry, St. Petersburg, Russia

The international conference of FAO/SCORENA European Cooperative Research Network on Flax and Other Bast Plants "Flax and Allied Fibre Plants for Human Welfare" was held in Cairo, Egypt, on 8-11 December 2003, bringing together 88 participants from 20 countries of Europe, Africa, Asia and North and South America. Presentations and posters were dedicated to all aspects of flax and other bast crops production, from the evaluation of genetic resources to economical analyses.

Scientific session 1 concerned biotechnology, genetic resources and breeding, including collection and evaluation of biodiversity as a basis for breeding, through which to promote the wider cultivation and application of fibre crops.

Many lectures were devoted to the importance of natural fibres and seed oil from bast plants for human health. Flax and manmade fabrics have dramatically different physiological effects on the human body, in particular on the level of α -globulin and histamine production and on the activity of the sebaceous glands. Linseeds are effective in preventing cancer, cardiovascular and heart disease, diabetes and menopause symptoms, as well as renal, alimentary tract, throat and skin diseases and many more.

The newly developed non-textile applications of flax were also highlighted. The availability, cost and satisfactory mechanical properties of natural fibres make them an attractive ecological alternative to glass, carbon and manmade fibres. Such natural fibre containing compounds are used in transportation (cars, railway coaches, aerospace), military applications, building and construction industries (ceiling paneling, partition boards, cement constructions, roofing), packaging, consumer products, etc. They are more functional, safer and more environmentally friendly than their manmade analogues. When incinerated they reach lower temperatures and release less CO and CO₂.

The conference also focused on the development of new processing methods of bast crop products, such as machinery for mechanical straw treatment and progressive fibre degumming, based on the principle of osmotic pressure.

Overall the conference played a good role in the propagation of natural products.

Romania's on-farm conservation project completed

Silvia Strajeru &
Dana Constantinovici
Gene Bank of Suceava
Suceava
Romania

During 2002-2003 Suceava Gene Bank undertook an ECP/GR-funded project entitled "Survey of the genetic diversity of Romanian traditional crop varieties and landraces conserved on-farm" to document and assess the genetic diversity of Romanian traditional crop varieties, landraces and associated local knowledge.

The project was implemented in Maramures County, an area of major diversity in northern Romania, spanning different ecological zones, where farmers have preserved old agricultural practices. Seventeen project villages, including 136 households (eight per site), were selected for the survey, based on variation of crop landraces and intensity of their cultivation. The study focused

on five species: *Phaseolus vulgaris*, *Phaseolus coccineus*, *Zea mays*, *Solanum tuberosum* and *Cucurbita pepo*. based on actual importance for local livelihoods and intraspecific variability.

The multidisciplinary team, composed of Suceava specialists, local authorities and farmers carried out two collecting missions to the selected sites to collect:

- information on socio-economic management and use of target crops;
- seed samples and information related to the genetic diversity conserved.

Altogether 175 seed or tuber samples were collected.

Most of the surveyed area contained traditional varieties, except for one locality prevalently growing modern types. The most important crop was common bean, closely followed by maize and potato. Common bean accessions showed the highest morphological variability expressed in seed colour, pattern, shape and size.

The agro-morphological and physiological research data collected were studied by means of classical biochemical analysis. All data obtained were included in the Suceava Database. These were statistically analyzed using the common calculation of dispersion indexes and sample correlations between some of the recorded parameters calculated.

Initial activities for agrobiodiversity conservation in Macedonia (FYR)

Sonja Ivanovska, Faculty of Agriculture, Skopje, Macedonia (FYR)
Gordana Posimonova, Institute of Agriculture, Skopje, Macedonia (FYR)

The Faculty of Agriculture in Skopje initiated a project in June 2003, supported by Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), Eschborn, Germany, to inventory old landraces still present today. Eighty-five households from 25 mountain villages in eastern Macedonia (FYR) were inventoried.

Some crops like hemp, cotton, flax, sunflower, poppy etc., once widely grown, are today totally extinct. The highest diversity was found in beans and fruit crops maintained within some families for 100-150 years. These old landraces were maintained for good taste/ aroma (corn, vegetables); long tradition (beans); unavailability of new seeds (oats, rye, barley); poor growing conditions; decision to grow healthy food; resistance to diseases, drought and frost etc.

According to local name and information collected, inventoried diversity was very high but, as detailed description is not possible, presumably there are many duplicates and different entries registered under same name. Therefore, in the project follow-up phases, detailed analyses of the collected material are foreseen.

The largest number of records was found for apples, followed by pears and plums. Among the other fruit crops, cherry and sour cherry were most present.

The highest number of entries for cereals was for corn (86), barley (48), rye (36), oats (33) and wheat (26). Three types of beans were registered: *Phaseolus vulgaris* ssp. *vulgaris* (120 entries), *Ph. vulgaris* ssp. *nanus* (67) and *Ph. multiflorus* (18) with very high diversity in shape, seed and pod color. Green beans registered 50 entries. Other legume crops such as peas, lentil and soybean had fewer entries, while *Vicia ervilia* was not found in the field, but only in two household stores for the preparation of medicaments from the seeds.

The highest diversity in vegetables was found for pumpkins, mainly with *Cucurbita maxima* Duch., *C. pepo* L. f. *sphaericus* and *C. moschata*. For pepper and tomato, only varieties maintained for more than ten years were recorded: 62 entries of pepper *C. annuum* ssp. *macrocarpum* var. *longum* with nine various local names and chilly pepper in two main forms: *C. annuum* ssp. *microcarpum* - with var. *chipca*, var. *conoidea*, var. *abbreviatum*, var. *cerasiformis* and *C. annuum* ssp. *microcarpum* var. *acuminatum*. For tomato, 42 entries were registered. Only one entry for the oldest potato landraces grown in the region (*Valugar* and *Old German Seed*), both now extinct, was found, therefore requiring urgent conservation measures.

The project results were published to raise public awareness and the seed collection was presented at the Agricultural Fair in Skopje in October 2003.



Cucurbit variety from Macedonia (FYR).
Photo: S. Ivanovska

EPGRIS - a window of hope for Armenian PGR



Natalya Rukhkyan
Ministry of Agriculture
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Yerevan
Armenia

The botanical resources of Armenia have been the subject of study since 15th century. The more extensive inventories and detailed studies of herbal use were made in 19th century, then after the 1920-30s vegetation mapping and geo-botanical studies began with an inventory of pastures and rangelands. However, the golden age of research on Armenian *flora* was in the 1950s, culminating in the production of nine volumes of "The *Flora* of Armenia" documenting dicotyledonous vascular plants.

After the collapse of the Soviet Union, government funding for PGR sciences was withdrawn. Faced with the war, earthquake and economical blockade, Armenia turned its focus to surviving. The once prosperous institutes and botanical gardens were plunged into desolation. Without electricity, water and heating many collections and unique material were lost. Priority was given to saving whatever possible and to continuing research, even without equipment, using the old methods.

The turning point came in the 1990s when Armenia signed a number of Agreements for collaboration with international organizations. The sizes and compositions of saved plant collections were unknown. The old methods could no longer ensure accurate results, but computers were an unattainable luxury and Internet as the new method of communication was rare. The focus of future activities still remained unclear.

Within this climate, the EPGRIS project started in Armenia in 2001, providing the perfect opportunity to carry out a National Inventory. Data was gathered from all Armenian PGR institutions and analyzed, giving a clear picture of the material held.

A computerized database for PGR documentation gave outstanding benefits and showed the weak points of the

old manual methods. This helped Armenian scientists to believe in this new approach. The understanding that even extremely relevant information could no longer be presented to the world in the old format stimulated institutions to turn towards electronic documentation of data.

Initially Armenian scientists were reluctant to believe that the EPGRIS project would change the situation, yet data on collections saved by their supreme efforts are now published and are accessible via the EURISCO on-line catalogue. These 2756 accessions of *ex situ* seed collections present not only wild relatives of cultivated plants, which are the treasure of Armenia, but landraces and bred varieties.

Through the EURISCO catalogue, Armenia is now attracting more researchers and in 2004 two collecting missions are planned. It is believed that through EURISCO Armenian material will attract the interest it rightfully deserves. As a Soviet Republic, Armenia was isolated from the rest of the world. Now equipped with computers from EPGRIS and other international projects, Armenian institutes have adopted standard descriptors, databases and Internet, keeping them abreast of development. The EPGRIS project, like a window into Europe, confirms that Armenia can and will contribute to the prosperity of our planet and this encourages and stimulates Armenia to work for the future.

Announcing the CAC Web site

The CAC-biodiversity Web site describes plant genetic resources initiatives in the eight Central Asia and Trans-Caucasus countries: Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan. It provides a wide range of relevant information on biodiversity, climate, geography etc., as well as maps and photos.

There are also links to institutions involved in PGR, profiles on PGR Units, PGR projects and collection missions, as well as details of contact persons in each country.

The Web site also provides interesting and detailed cultural and historical overviews of each country, including a "Visitor's Notepad" page that gives excellent and exhaustive tourist information on cities and sites, visa, regulations, currency, transport etc.

Well worth visiting at:
www.cac-biodiversity.org/

News from the Regions...

Seed diversity fairs: celebrating and enhancing traditional crop diversity

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IPGRI-SSA
Regional Office for
Sub-Saharan Africa
Nairobi
Kenya

This article is adapted from one of the technical advisory notes produced by the project on the 'Programme for the development of strategies for in situ conservation and utilization of plant genetic resources in desert-prone areas of Africa'.

Seed diversity is one of the key elements in ensuring food security to poor farmers in desert prone areas, who often face a myriad of bottlenecks ranging from seed procurement and storage, through to marketing.

Such bottlenecks include permanent or periodic lack of access to preferred varieties as well as non-sharing of seed related information; yield loss; lack of seed; difficulties in transmission of knowledge; lack of knowledge on existing diversity; limited uses of conservation products and tools; need for an evaluation strategy; maintaining and using PGR sustainably; loss of local varieties; non-sharing of genetic material among farmers; limited networking among stakeholders; lack of trust; poor organizational ability; weak market linkages and poor awareness of policy makers.

Seed fairs can help farmers have better access to desired varieties, as well as information leading to better implementation of plant genetic resources-based livelihood strategies.

A seed fair is a one to two day forum, festival, ceremony or platform for exhibiting seed and enhancing

wider crop and variety diversity. It can be used to raise the awareness of farmers and local administration and leadership structures on diversity, to exchange local knowledge and allow exchanges and interaction between farmers, extension staff and researchers. The event also increases farmers' competence in managing and conserving their crop diversity, as well as building institutional capacity (to form farmer organizations).

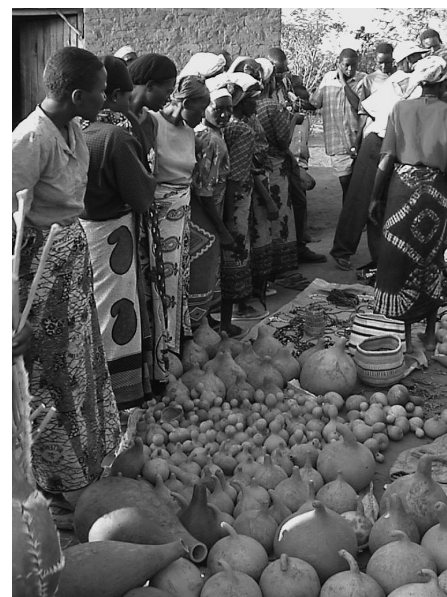
Participants include villages, farmers, NGOs, local leadership, researchers and local administration, with exhibitors ranging from 30 to 300 farmers, depending on the level of awareness and previous fair history. Seed diversity and related agricultural products are displayed on tables or on the ground and these are then judged for extent and quality of diversity.

For seed fairs to be effective there has to be dependency on traditional varieties.

Such varieties may have been lost from the area due to adverse weather elements or the introduction of hybrids, which in turn may have led to cash crop or hybrid intensification, or cash crop diffusion leading to genetic erosion from the community. Seed fairs are therefore appropriate where farmers feel that there is insufficient diversity of varieties or where farmers lack appropriate fora for seed exchange.

Another necessary element is a minimum level of diversity to attract farmers and other stakeholders. In areas where there is poor farmer organization and involvement of local administration, the forum allows good interaction. The tool of seed fairs is very appropriate for risk-prone agricultural conditions.

There are a number of potential constraints for seed fairs including financial, climatic (poor conditions/poor harvest due to drought), communication (where large areas are involved) and socio-political climate, which can all



Community seed fair held on a farm in Manyenyoni village, Kitue District, Kenya. Photo: Y. Morimoto, IPGRI



Display of bottle gourd diversity (Lagenaria sicaria) at a community seed fair in Katitika village, Kenya. Photo: Y. Morimoto, IPGRI

hamper participation or a successful outcome. Proper timing is also important (fairs should not coincide with cultural events or be organized too late). The poor outcome of previous fairs (misuse of fairs, few incentives, bad judging) can also determine future participation levels.

A successful seed fair can be aided by ensuring: entertainment aspects are organized (including songs, plays and local dances); the objectives are clear to all stakeholders; sufficient seed and diversity is exhibited; that the farmers themselves drive the process (inviting guests, defining judging criteria); prepare and invite participants well in advance; strategic selection of judges; use of local resources; seed fairs are part of a larger programme; price-driven fairs are avoided (give non material incentives).

Seed fairs should lead to increased crop and variety diversity as a result of farmers experimenting with exchanged seed.

Inter-regional conference on International Agreements

Niels Loowaars & Bert Visser
Centre for Genetic Resources
The Netherlands (CGN)
WUR, Wageningen
The Netherlands



Representatives of four PGR networks met in Addis Ababa, Ethiopia, 10-12 December 2003 at a conference on "Inter-regional networking for PGR: Exchanging experiences and views on the implementation of new international agreements on Plant Genetic Resources". The conference was hosted by the Ethiopian Agricultural Research Organisation, the Institute for Biodiversity Conservation and Research and ILRI, and was a joint initiative of EAPGREN, ECP/GR and GRENEWCA, covering East Africa, Europe, and West & Central Africa respectively.

The main aim of the conference was to discuss the implementation of the new agreements in the area of PGR, including the International Treaty on PGRFA (2001), the Bonn Guidelines on Access and Benefit Sharing (ABS) of the CBD (2002), the WTO Agreement on intellectual property rights (TRIPS), and possibly the WIPO Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore.

The conference was intended as a first step to bring the issue of implementation of the new PGR agreements to the level of collection holders, where access decisions are often prepared and opportunities for benefit sharing observed. The conference aimed to enhance knowledge and increase capacities among genebank managers, promote sharing of experiences, improve transparency on procedures and develop mechanisms for inter-regional collaboration. Over 50 participants from 23 countries, two thirds from Africa and one third from Europe, participated.

The conference first summarized the consequences of the

international agreements and initiatives at the genebank level and reported on ongoing activities in the regions. User perspectives were brought to the table and major issues were prioritized, followed by discussions in working groups.

National policy makers struggle to bring international agreements in line with each other and with national development policies. Weaknesses in legal, institutional and scientific capacities, major horizontal and vertical 'disconnections' and poor participation in international processes were all identified.

A major concern of the breeding industry is the freedom to carry out research, breeding and maintenance of the international flow of germplasm. NGOs argue that there is a need for national registries for traditional and local varieties and for adaptations of seed laws to allow for their marketing.

The international agreements pose new challenges to genebanks in their roles as users, providers and brokers of genetic resources, and as providers of policy support. They also face new tasks evolving from other developments such as on-farm management of PGR and biotechnology: documentation of indigenous knowledge, technical support to informal seed systems, germplasm enhancement and managing DNA collections.

Some steps are undertaken in different regions to redefine this changing roles of genebanks.

It was agreed that critical success factors for establishing effective regulations are capacity building and policy and technical research in the regions, effective information exchange, increased capabilities of negotiators and stakeholder involvement.

Implementation of the international agreements should have a long-term outlook and result in regulations that are simple, practical, acceptable for providers and users, complementary to other instruments and transparent regarding the negotiation process. Material Transfer Agreements should include the Mutually Agreed Terms for ABS.

Raising awareness is needed at all levels and sectors. IPGRI was called upon to approach policy makers and to prepare communication materials for stakeholders and the press. The introduction of genetic resources issues in school and university *curricula* was suggested. New institutions, such as Competent National Authorities and a National Focal Point on ABS, need to be operational and could play a central role in increasing awareness.

Genebanks could take responsibility to act as brokers between providers and users of germplasm in partnership with private sector and research institutions. Farmers need to be seen as the central actors in maintaining diversity on-farm, and farmers' rights should be understood as rights and not privileges. The financial mechanisms of CBD and IT may concretize support of local communities in recognition of farmers' rights.

Sub-regional organizations have a specific role in sharing experiences on these issues, developing best practices and harmonizing regulations and systems. Inter-regional interaction is considered very fruitful. The SSA and European networks will invite participants from the other networks in their planning meetings. Options for the establishment of regional genebanks or task sharing need to be pursued.

News from IPGRI...

Generation Challenge Programme launched

IPGRI Fellowships on Broadleaves and Grapevine

The first two IPGRI research fellowships on Broadleaves and Grapevine were awarded at the Centre de Recherche Public Gabriel Lippmann in Luxembourg to two Ukrainian scientists: Yevhen Hubin from the Laboratory of Forest Tree Breeding Ukrainian Research Institute of Forestry and Forest Melioration, Kharkov, Ukraine, in the area of *in vitro* micropropagation of rare Noble Hardwoods; and Svetlana Gorislavets from the Institute for Vine and Wine "Magarach", Yalta, Ukraine for genetic markers research on grapevine.

We congratulate the two scientists and look forward to reading more on their achievements in the next issues of this Newsletter.

IPGRI, together with CIMMYT and IRRI, is a founding partner of one of the three Challenge Programmes recently launched by the CGIAR in a bold move to place increased emphasis on international, multi-institute, cross-disciplinary collaboration. The Generation Challenge Programme: "Cultivating Plant Diversity for the Resource-Poor" will address the need for increased food security and improved livelihoods in developing countries by unlocking the genetic potential, and enhancing the use, of public genetic resources in plant breeding programmes. Drought tolerance has been chosen as the pilot characteristic for genomic analysis and crop improvement because it is a difficult trait to improve by traditional breeding and is important for most developing countries and virtually all 22 crops under investigation.

The major output will be a unique public platform for accessing and developing new genetic resources using both molecular technologies and more traditional means. To help close the

biotechnology divide between North and South, new science-based enabling and intermediate technologies will be generated, as will an unprecedented array of genomic and genetic resources. Both will be made available as public goods and disseminated under a technology transfer plan to developing countries.

IPGRI's role, as host of the CGIAR's System-wide Genetic Resources Programme (SGRP), allows it to help determine how the wealth of diversity housed in the CGIAR germplasm collections can be "unlocked" to solve the problems being addressed by the Challenge Programme.

Other partners in the Generation Challenge Programme consortium are additional CGIAR Centres (CIAT, CIP, ICARDA, ICRISAT and IITA), advanced research institutes such as the University of Wageningen (The Netherlands); Cornell University (USA); Agropolis (France); NIAS (Japan); the John Innes Institute (UK); and national agricultural systems in China and Brazil. GFAR,

the Global Forum for Agricultural Research, plays an important advisory role. The Generation Challenge Programme is divided into five sub-programmes:

- Genetic Diversity of Global Genetic Resources (Agropolis);
- Comparative Genomics for Gene Discovery (IRRI);
- Trait Capture for Crop Improvement (ICRISAT);
- Bioinformatics Genetic Resources, Genomic, and Crop Information Systems (University of Wageningen);
- Capacity-building (IPGRI).

The first year of operation of the Challenge Programme began in October 2003 with a funding base of US\$7.5 million. "Generation" is expected to last for at least five to ten years.

For more detailed information, please contact IPGRI or consult the Challenge Programme Web site: www.generationcpg.org/

New publications/announcements

IPGRI is pleased to announce the recently published *Descriptors for Genetic Markers Technologies* developed by Carmen De Vicente, Thomas Metz and Adriana Alercia. Available for downloading at www.ipgri.cgiar.org/publications/pubfile.asp?ID_PUB=913. Comments and suggestions are welcomed by Adriana Alercia (Email: aalercia@cgiar.org).

IPGRI presents a Learning Manual on CD-Rom entitled: Using molecular marker technology in studies on plant genetic diversity, by M. Carmen de Vicente (IPGRI) and Theresa Fulton (Institute for Genomic Diversity, Cornell University). For orders please link to: www.earthprint.com/go.htm?to=IPGRI912

Agropolis presents a booklet available in French and English at: www.agropolis.fr/actualiteevenements/, to promote research and training opportunities within Agropolis member institutes.

The *Musa* Germplasm Information System (MGIS) is now available on-line, hosted by the SINGER server at: <http://mgis.grinfo.net>, offering access to information and photos of accessions, recorded by curators of 16 institutions holding a *Musa* field or *in vitro* collection.

Grants for Institutional Memberships to Public Library of Science

The Information Program of the Open Society Institute (OSI) has announced two grants programmes to support: a) 50 Public Library of Science Institutional memberships for institutions in developing and transition countries, entitling authors to a waiver of publication charges; b) BioMed Central Institutional memberships for institutions in countries where the Soros foundations network is active. Further information at: www.soros.org/openaccess/grants.html

Vavilov-Frankel Fellows for 2004

IPGRI is pleased to announce the winners of its annual awards for young scientists, the Vavilov-Frankel Fellowships. Tamar Jinjikhadze from Georgia will study the molecular basis of resistance to rust diseases in *Triticum timopheevii*, a species of wheat endemic to Georgia. Orou Gaoué will map the distribution of diversity and responses to exploitation in two species of African mahogany in his home country, Benin.

IPGRI established the fellowships to commemorate the contributions made to plant science by Nikolai Ivanovich Vavilov of Russia and Sir Otto Frankel of Australia. The fellowships are intended to enable young scientists to carry out relevant and innovative research outside their countries, thus contributing to their own professional development and to the ability of their countries to manage and conserve crop diversity.

In 2004, for the first time, the Grains Research and



Development Corporation of Australia and Pioneer Hi-Bred International Inc., a

DuPont company, are supporting the fellowships.

GRDC is supporting Tamar's study of the little-known wheat *T. timopheevii*, which holds the promise of improving the performance of modern bread wheats grown around the world, including in Australia. It could be extremely important in Georgia, where wheat yields are low partly because of losses inflicted by rust fungi. Tamar hopes to gather a collection of about 150 samples from Georgia and take them to Sydney University to assess their resistance against a panel of known races of rust.

Capacity building is a crucial component of the Vavilov-Frankel Fellowships, which will give the Georgian Institute of Farming Plant Genetic Resources Centre, Tamar's home institute, the ability to use modern techniques in its efforts to make use of crop diversity. Tamar also hopes to start a breeding programme that will transfer new sources of rust resistance into favoured Georgian cultivars.

Orou Gaoué is currently pursuing a PhD at the



University of Hawaii. His fellowship, which is supported by Pioneer Hi-Bred, will

study the status of *Khaya senegalensis* and *K. grandiflora*, two African

mahoganies exploited extensively in Benin. The Red Data Book lists both species as vulnerable and some stands have been heavily exploited for generations. Heavy harvesting can affect the reproduction of tree species. Orou will use molecular techniques to map tree genetic diversity in areas that have experienced different levels of use to discover whether there is a link between the harvesting pressure on a population and its genetic diversity. He will also explore to what extent trees in protected areas represent a richer sample of diversity than trees elsewhere, and whether *Khaya* plantations contribute to the conservation of genetic diversity.

The project will give Benin its first detailed analysis of

the diversity of forest tree species, an outcome that Orou believes will be important throughout West Africa. The map of genetic diversity will be a vital input into discussions between the Sub-Saharan Forest Genetic Resources Network SAFORGEN and local authorities to plan effective conservation.

The 2005 round of Fellowships will be announced in July with a closing date of October/November 2004. For further details on the Frankel-Vavilov Fellowship scheme, including application forms, contact: Vavilov-Frankel Fellowships, IPGRI, Via dei Tre Denari 472/a 00057 Maccarese (Fiumicino), Italy; Fax: +39-0661979661; Email: e.clancy@cgiar.org or visit: www.ipgri.cgiar.org/training/vavilov.htm

Convention on Biological Diversity (COP VII) - update

In his closing remarks to the seventh meeting of the Conference of the Parties to the Convention on Biological Diversity (COP VII), held in Kuala Lumpur, Malaysia in February 2004, Executive Secretary, Hamdallah Zedan noted the unprecedented participation, the highest ever for the Conference, attended by some 2000 participants, including 80 Ministers.

By adopting measurable indicators and specific goals for the overall 2010 target, the conference has endorsed an important tool for governments to monitor progress. The 2010 target to significantly reduce the current rate of biodiversity loss was endorsed in 2002 by Ministers at the previous CBD conference and by the World Summit on Sustainable Development in Johannesburg. The sub-targets agreed in Kuala Lumpur include conserving at least 10% of each type of ecosystem, protecting those areas that have a particular importance for biodiversity, stabilizing populations of certain species in decline and ensuring that no species of wild flora or fauna are endangered by international trade. The sub-targets will be pursued through the Convention's various work programmes. New work programmes on protected areas and on mountain biological diversity were also adopted. Another major accomplishment was the launching of new talks on an international regime on access to genetic resources and benefit-sharing.

IPGRI actively participated with a number of interventions on behalf of the CGIAR, including one of the two keynote addresses on the first day of the Conference given by IPGRI's DG, Emile Frison, on Biodiversity, nutrition and health (full text available at www.biodiv.org/doc/speech/2004/sp-2004-02-09-cop-02-en.pdf).

There were a number of side events held, including one on the maintenance and use of agricultural biodiversity. This event was chaired by Setijati Sastrapradja and attended by over 60 people from about 25 countries and resulted in the proposal to develop a facilitation unit to support collaboration on agricultural biodiversity research, which was welcomed by the COP VII resolution on the agricultural biodiversity work programme. Another well attended side event focussed on the work of the Global Crop Diversity Trust and provided a good opportunity to update delegates on recent developments.

WorldFish and CIFOR, other CGIAR Centers, held a well attended side event on 'Revitalizing the Ecosystem Approach: Lessons from Fisheries to Forestry', and reference to the CGIAR's integrated natural resource management approach has been included in the draft report on the CBD's ecosystem approach.

IPGRI organized two exhibition booths, one for the CGIAR/Future Harvest Centres, featuring work and publications from all the Centres, and one on the Global Crop Diversity Trust.

In conclusion, the numerous references to the CGIAR in the COP VII reports and draft decisions show that it is recognized as a key partner in the CBD work programmes and demonstrates the importance of ensuring that it continues to have an active participation in its meetings.

COP VIII will be held in Brazil in 2006.



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Forthcoming meetings

30 August - 1 September 2004

Genomics Momentum
2004. Wageningen, the
Netherlands.
www.genomicsmomentum2004.org

2-4 September 2004

Annual meeting of SAVE
Foundation and SAVE
Network at Bled, Slovenia.
office@save-foundation.net

8-11 September 2004

17th EUCARPIA General
Congress, Genetic Variation
for Plant Breeding, Tulln,
Austria.
www.eucarpia.org/eucarpia17/

12-15 September 2004

ABIC International
Agriculture Biotechnology
Conference "AgBiotech
goes Europe".
Cologne, Germany.
www.abic2004.org

16-18 September 2004

Grapevine conservation
meeting, Yalta, Ukraine.
[www.ipgri.cgiar.org/regions/
europe/projects/SE-Europe/
Grapevine/Meetings.htm](http://www.ipgri.cgiar.org/regions/europe/projects/SE-Europe/Grapevine/Meetings.htm)

17-20 September 2004

Planta Europa Conference
on the Implementation of
the European Plant
Conserv. Strat. (EPCS).
[www.nerium.net/plantaeuropa/
index.htm](http://www.nerium.net/plantaeuropa/index.htm)

6-8 October 2004

Expert workshop on Forest
Landscape Restoration in
the Central and Northern
European Region.
Hämeenlinna, Finland.
www.efi.fi/events/2004/

14-15 October 2004

MCPFE Expert Level
meeting, Warsaw, Poland.
www.mcpfe.org

20-23 October 2004

"Terra Madre-World meeting
of Food Communities".
Torino, Italy.
www.slowfood.com

21-25 October 2004

"Salone del Gusto", Slow
Food International Food
and Wine show. Torino, Italy.
s.abbona@slowfood.it
www.slowfood.com

24-28 October 2004

3rd Global workshop of the
FAO European Cooperative
Research Network on Flax
and Other Bast Plants:
"Bast fibrous plants for
healthy life".

Banja Luka, Bosnia &
Herzegovina.
Email: netflax@inf.poznan.pl

25-29 October

Second Global Summit on
Medicinal and Aromatic
Plants: "Prospects and
constraints in cultivation,
production and marketing of
medicinal plants".
New Delhi, India.
[www.cenfound.org/global/
global.html](http://www.cenfound.org/global/global.html)

4-6 November 2004

IAMO Forum 2004
Conference on the Role of
Agriculture in Central and
Eastern European Rural
Development: Engine of
change or social buffer?
Halle (Saale), Germany.
www.iamo.de

9-13 November 2004

5th International Walnut
Symposium
Sorrento, Italy.
[www.walnut2004.
sistemacongressi.com](http://www.walnut2004.sistemacongressi.com)

18-19 November 2004

International workshop on
the Methodology for
Environmental Assessment
of Grain Legumes.
Agroscope FAL Reckenholz,
Zurich, Switzerland.
www.grainlegumes.com

Staff changes within the Europe Group

Michele Bozzano

Earlier this year, Michele took up the position of Programme Specialist, Forest Genetic Resources and is actively contributing to the daily tasks of the EUFORGEN Programme. This includes inputs to the production of technical publications and the maintenance of the Web site. Michele's responsibilities also focus on the development and support of collaborative training and capacity building initiatives in Europe.

Muriel Colas

The staff of the Regional Office for Europe say good-bye and send their best wishes to Muriel who will leave IPGRI over the Summer 2004 to go back to France. Muriel joined IBPGR in 1991, later IPGRI, and has worked as Programme Assistant to the Regional Director for Europe since 1994.

Brigitte Laliberté

Brigitte has left the Regional Office for Europe to work on a full-time basis with the Global Crop Diversity Trust. Since February 1999, Brigitte Laliberté has worked as Programme Specialist, Crop Genetic Resources, Europe Group. In this position, she has provided scientific support to the ECP/GR Thematic Networks, in particular, to the European search catalogue of crop germplasm EURISCO, launched in September 2003 and also provided essential inputs to the EU-funded project "PGR Forum".

Olga Spellman

Olga's responsibilities and tasks within the Europe Group have changed focus, as of 1 April 2004, from Programme Assistance to the ECP/GR Programme (since May 1996), to assisting in the production of the Regional Newsletter for Europe. This will primarily include compiling the material submitted for the Newsletter issue and English language editing.