

European Platform

Since June 1997, a home page called 'European Information Platform on Crop Genetic Resources' has been accessible on the Internet (<http://www.cgiar.org/ecpgr/platform>). This is one of the outcomes resulting from the recommendations of the Documentation meeting in October 1996 in Budapest, Hungary (see issue 9, page 3).

The Platform is the result of the coordinated efforts of the ECP/GR Internet Advisory Group (Dr P. Campo, Groupement d'Etude des Variétés et des Semences (GEVES), Dr Th. van Hintum, Centre for Genetic Resources, the Netherlands (CGN), Dr M. Hulden, Nordic Gene Bank (NGB), Dr D. Jiménez Krause, Centre for Agricultural Documentation and Information (ZADI), Mr K. Painting and Mr L. Maggioni, IPGRI). The Platform was created to strengthen the national programmes and serve their needs by providing a wide array of information and links to the relevant Internet sites across Europe. It offers on-line access to several ECP/GR Central Crop Databases (currently *Agrostis*, *Avena*, *Barley*, *Brassica*, *Glycine*, *Phalaris*, *Phaseolus*, *Phleum* and *Poa*) and to other regional and international databases (i.e. *Beta*, *Lathyrus*, Minor fruit tree species, potato, *Triticum* and *Vitis*). Access to the ECP/GR *Allium*, *Lolium*, *Prunus* and *Trifolium* databases is currently under construction. Additional information and services include the Directory of European PGR Collections, the provisional list of FAO Institution Codes, the IPGRI/FAO Multi-crop Passport Descriptors, and the outcome documents of the Training Workshop on on-line central crop databases (Bonn, June 1997).

Appeal for collaborative research partners

The Institute of Evolution, University of Haifa, Israel, is seeking partners interested in undertaking collaborative research efforts concerning the genetic control and exogenous recombination in distant crosses of barley.

Recombinogenic treatments, such as heat stress and x-rays at the early meiotic phases in distant crosses of barley, may induce an increased rate of recombination events. This could be the basis for a more efficient technique of gene introgression from wild barley to elite cultivars. A first step in this direction is the detailed analysis of biological factors affecting the potential success of gene introgression.

The research will be based on wild sources of *Hordeum spontaneum* from geographically distant regions, including the Middle East, Central Asia, Spain and Morocco, and ecologically contrasting populations (e.g. mesic versus desert) and derivatives of *H. bulbosum* x *H. spontaneum* in crosses to *H. vulgare*. Rates of spontaneous versus induced recombination events will be compared using cytological, morphological and molecular markers. Specific objectives of the work are to compare the frequency and genomic distribution of recombination events in intraspecific and interspecific hybrids of barley (F1 and F2-F3) as well as to evaluate the genetic variation in the recombination patterns in hybrids obtained from the different sources.

Establishment of a successful recombination strategy may pave the way to a new technology of accelerated introgression. As a result, wild barley collections in the genebanks could increase their potential value for rapid and effective utilization. Induced recombination may also enable increased efficiency of physical mapping and of positional cloning of genes, due to an increased rate of recombination events in genomic regions with suppressed recombinations.

Institutes and individuals interested in joining this collaborative research should contact Dr A. Korol, Institute of Evolution, Haifa University, 21905 Haifa, Israel. Tel: +972-4 840499; Fax: +972-4 8246554; Email: Korol@esti.haifa.ac.il.



Broadleaved forests in southeastern Europe

Countries in southeastern Europe are covered with indigenous forest resources valued for their quality and natural diversity. Nevertheless, genetic resources of broadleaved forest trees are particularly threatened. The negative impact of rapid environmental change, excessive logging, atmospheric pollution and often improper silvicultural management are strongly felt. Numerous stands of ash, beech, elm, lime, maple, oak and other species are consequently attacked by disease and suffer from severe drought throughout southeastern Europe.

In the past, much work has been dedicated to forest genetic research in

this part of Europe but the current economic situation does not allow the full implementation of national plans for the investigation, conservation and sustainable use of genetic resources. A project involving Bulgaria, Moldova and Romania has recently been launched to address the *in situ* conservation of genetic diversity of native forests, to further develop and use *ex situ* conservation technologies and to promote an integrated approach to the conservation and use of genetic resources in the forestry practice of these countries. The project is carried out with the financial assistance of Luxembourg, which also actively participates in the project through

the Environment and Biotechnology Research Unit of its University Centre.

During the span of this three year project, inventories of forest genetic resources of native broadleaved species will be undertaken and recommendations developed for the conservation and rational use of broadleaved genetic resources. Additionally, capacities will be developed for micropropagation techniques. An important secondary outcome of the project will be the strengthening of links between institutions and scientists from the sub-region with their counterparts in other European countries.

First EUFORGEN Meeting on Social Broadleaves

The first EUFORGEN meeting on Social Broadleaves was held 23-25 October 1997 at the Station de Recherches Forestières, Institut National de la Recherche Agronomique (INRA), Bordeaux-Cestas, France. Participants representing 23 countries identified common needs relating to gene conservation of Social Broadleaves in Europe and agreed on a joint Workplan. For the immediate future, the scope of the Network will include *Quercus robur*, *Q. petraea*, *Q. pubescens* and related white oak species, as well as beech (*Fagus sylvatica* and *F. orientalis*). Despite activities and projects in many

countries, the lack of an adequate information flow is a major constraint. This new Network aims at contributing to a better exchange of expertise and experience among countries. In addition to country reports and statistics, a synthesis of legislation and other regulations related to genetic resources of Social Broadleaves and an overview of ongoing research will be compiled as a priority and distributed as part of the report of the meeting.

Further common tasks include terminology definition, descriptor lists and databases, plus the development of joint, long-term, practically oriented gene

conservation strategies. The knowledge existing in individual countries will be assessed using a questionnaire to provide a basis for the above mentioned strategies. The ultimate goal is to provide technical guidelines for the sampling, design and management of gene conservation units of oak and beech in Europe. The Network will also raise awareness about the importance of the genetic resources of these species as cultural heritage, through a public awareness leaflet and a slide collection.

Dr A. Kremer from the Station de Recherches Forestières was elected as Chair and Drs T. Geburek and L. Paule will act as Vice-Chairs of the Network for a period of two years. It was agreed that the coverage of species by this Network and its title be readdressed at the next meeting to be held in early 1999.

The Network meeting was held immediately after the meeting of the French National Commission on forest gene resources. This enabled participants of both meetings to interact closely, and Network members were particularly interested in the new Charter on Forest Genetic Resources which had been adopted by the Commission.

A report on this Charter and the coordination of activities on FGR in France will be included in the next issue of the Newsletter for Europe.



European Oak (Photo: J. Turok).

IUFRO Symposium on Norway Spruce



A recent symposium of the International Union of Forestry Research Organizations (IUFRO) Working Party on 'Norway spruce breeding and genetic resources' was held in

Stará Lesná, Slovakia, during the first week of September 1997. This Working Party has a long tradition in facilitating tree breeding and genetic resources activities on Norway spruce in Europe. Close links exist with the EUFORGEN *Picea abies* (Norway spruce) Network (see Issue 9, page 7).

Up-to-date research results for ongoing projects were presented and contributions summarized the history and suggested perspectives for Norway spruce provenance research. Rapid progress in the application of molecular DNA markers for determining phylogeography drew the attention of around 60 participants at the Symposium. Aspects of distribution, ecology, phenology, breeding and gene conservation were presented by speakers from various parts of the distribution area. The genetic adaptability of the species to a changing environment, an obvious topic associated with Norway spruce, was discussed in detail.

During a field trip, participants discussed first hand various aspects of tree breeding and genetic resources of Norway spruce in Slovakia, the Czech Republic and Poland.

Major issues raised for development by the Working Party in the future include a research bibliography, a monograph on Norway spruce genetics and breeding, evaluation of data from international provenance experiments, regular updating of the database and new research projects.

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Populus nigra Network: focus on *in situ* conservation

A number of new representatives were present at the fourth *Populus nigra* Network meeting 3- 5 October 1997 at the Institute for Forestry and Game Management in Geraardsbergen, Belgium. For the first time, participants from Moldova, Poland, Russian Federation, Ukraine and the Fed. Rep. Yugoslavia attended a meeting of this Network. This provided an opportunity to develop further links and extend the ongoing activities of the Network. Considering the extension of natural riparian *P. nigra* stands in eastern Europe, this broad attendance was very timely for developing the Network's strategy on *in situ* conservation.

An overview of existing knowledge and ongoing research projects on dynamic processes in riparian ecosystems was presented. The implications of these factors for developing gene conservation strategies in *P. nigra* were discussed and a number of objectives, methods and criteria for designating *in situ* gene conservation stands were agreed upon. New tasks will be developed to promote further establishment and management of a network of *in situ* stands throughout Europe (i.e. an inventory of ecosystem management effects, technical recommendations for the restoration of riparian ecosystems, and monitoring of diversity). A list of minimum standard descriptors for inventories of *P. nigra* stands was endorsed, and a synthesis of *in situ* activities currently undertaken in European countries was presented. It was agreed that *P. alba* be included in future joint activities.

A new project on genetic diversity in riparian ecosystems (EU/FAIR Shared Cost) partly developed during previous Network meetings was presented by the coordinator Dr B. van Dam of the Institute for Forestry and Nature Research (IBN/DLO), the Netherlands. The complementarity and close collaboration between this project and the Network should ensure broad dissemination of the research results and effective implementation of strategies and guidelines for the practical gene conservation activities in all interested countries.

The ongoing Network tasks (European clone database, improving information flow, exchange of reference clones, EU collection, literature reviews and public awareness) were also reviewed. The Network continues to seek collaboration with countries in the entire distribution area of *P. nigra*, beyond the confines of Europe.



Applying molecular markers to *ex situ* collections



Lettuce samples being taken for DNA extraction
(photo: Centre for Genetic Resources, the Netherlands).

A three year demonstration project funded by the Biotechnology Programme of the European Union (EU) has recently been initiated, involving the Centre for Plant Breeding and Reproduction Research (CPRO-DLO), the Netherlands; IPGRI; the Botanisk Institut, Denmark; the Institute for Arable Crops Research (IARC) - Long Ashton Research Station, UK and Keygene and Perkin Elmer BV, both in the Netherlands. The objective is to demonstrate the application of molecular marker technology for improving genebank methodology. The entire CPRO-DLO lettuce collection of 2118 accessions will be characterized using Amplified Fragment Length Polymorphisms (AFLPs) and Sequence Tagged Microsatellites (STMSs). The results will be used to describe the genetic structure of the collection and to identify correlations between the markers observed and useful traits or origin data.

This will allow the composition and use of the collection to be optimized and will also validate the multiplication and regeneration techniques currently used.

There has been substantial progress in the development of molecular approaches in the study of genetic resources and biodiversity, and the EU funded programs of DG XII are making substantial contributions in this area. With this project, this research area enters into a new and more challenging phase of applying the technologies directly to genebank management problems.

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National Symposium on Genetic Resources: Federal Republic of Yugoslavia

The winter resort of mountain Zlatibor, Fed. Rep. Yugoslavia, was the venue of the first national Symposium on Genetic Resources held 30 September - 3 October 1997, organized by the Serbian Scientific Society and the Federal Institute for Plant and Animal Genetic Resources. In addition to national participants, the 147 participants included representatives from Belarus, Czech Republic, Greece, Russian Federation, the Ukraine and IPGRI.

Two working groups established during the Symposium focused on plant and animal genetic resources. Over 100 papers dealing with genetic resources were presented during the Symposium, and these will be published in a special six-volume edition of the Yugoslav journal 'Contemporary Agriculture' in 1998.

A significant event of the Symposium was the review of the strategic federal project entitled 'Establishment of the Yugoslav Plant Gene Bank'. Unfortunately, although initiated in 1989, this project has been suspended due to the civil war. Delegates emphasized the need to complete the construction of the National Gene Bank facilities. The importance of

the newly established Federal Institute for Plant and Animal Genetic Resources was highlighted, as well as the need for consolidating its duties in the national PGR programme. With the ease on internal sanctions and new interest of the government in genetic resources and biodiversity issues, it is expected that this project will be completed soon.

The Federal Institute for Plant and Animal Genetic Resources coordinates and partly finances the activities of all national institutes engaged in conducting research. This includes the Institute of Field and Vegetable Crops at Novi Sad, which focuses on wheat, maize, sugar beet, sunflower, vegetables, hops and medicinal herbs; the 'Srbija' Institute with numerous branches on fruit and grapes, small grains, vegetables, potato, forages, grape and vines and technology; the Maize Research Institute 'Zemun Polje' and the Agricultural Institute at Podgotica.

The meeting also prompted intensive discussions on the need for more effective actions in the conservation of forest and animal genetic resources. A number of activities were agreed upon at the

Symposium, including a series of measures to be taken to strengthen the national genetic resources programme involving the relevant national institutions. These proposals call to intensify the efforts invested in conserving genetic resources and agrobiodiversity and to strengthening international collaboration through programmes such as EUFORGEN and ECP/GR. Yugoslavia has actively participated in ECP/GR since its establishment in 1980. Networking will also be promoted at a national level, to strengthen the links between institutes and a scientific council will be created to oversee the programme and to further integrate national efforts within the region and in the international community.

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XI World Forestry Congress: Towards the XXI Century

The state and future of the world's forests and the need to improve their management for the benefit of all people was considered by 4200 participants from 145 countries gathered 13-22 October 1997 in Antalya, Turkey. Specific discussions were devoted to the conservation and utilization of Forest Genetic Resources (FGR), following a presentation of an invited paper by the Forest Genetic Resources Officer from IPGRI. From the discussions the following points emerged:

- Concerted actions are needed to strengthen national, regional and global activities and to enhance country capacities through information and technology transfer, networking and support of collaboration between countries and institutes.
- Concrete examples are required to demonstrate the compatibility of genetic conservation with managed use of forest resources. These should include full cost benefit analyses of tree improvement and the cost of losing resources and taking remedial action. Such studies should be carried out at the national, regional and global levels and results should be consolidated and widely disseminated.
- Balanced and integrated strategies for conservation, management and use need to be developed to ensure the continued adaptation to prevailing and dynamically changing environmental conditions, fulfilment of human needs and the production of the full range of goods, services and values that forests provide.
- Research on identifying patterns of genetic variation, understanding underlying evolutionary changes in forest ecosystems and development of practical conservation procedures. Conservation strategies should be flexible enough to incorporate new findings as research results become available.

The participants welcomed FAO's plans to assist countries to develop country-driven action-oriented sub-regional and regional workshops on the conservation, management and sustainable use and enhancement of forest genetic resources. This will be carried out in collaboration with the International Council for Research in Agroforestry (ICRAF), the Center for International Forestry Research (CIFOR), IPGRI and the International Union of Forestry Research Organizations (IUFRO).

The final declaration of the Congress stressed some of the major needs in the forestry sector, including an increased political will, more social forestry and renewed emphasis on the value of forests.

The need for research to improve forest management practices was also emphasized. In follow up to the Congress, these issues will now be taken up by the national, regional and international partners involved in the conservation of FGR and will be implemented in their programmes.

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Strengthening the scientific basis of *in situ*

What factors influence farmer decision making in the maintenance of local cultivars? How do these decisions reflect in the distribution of genetic diversity? How can value be added to local cultivars to encourage their continued production and use? These are among the questions facing the participants of a multi-donor project aimed at developing *in situ* conservation strategies for crop plants and their wild relatives. The goal of the second project meeting, 25-29 August 1997, in Rome, Italy, was to develop a strategy for research and to clearly outline the types of data needed to link farmer decision-making to genetic diversity, collection methodologies and analysis techniques.

The national PGR programmes of all nine participating countries, including Burkina Faso, Ethiopia, Hungary, Mexico, Morocco, Nepal, Peru, Turkey and Vietnam have recently widened their focus from traditional *ex situ* conservation for crop genetic resources towards *in situ* conservation strategies. In this project, they have placed particular emphasis on participatory approaches, both in the research and in activities, to add value to local cultivars, in order to ensure sustainability and relevance to the needs of farmers.

At the meeting, Working Groups composed of the country representatives, a wide range of technical advisors and representatives from FAO, IPGRI, other CGIAR centres and donor organizations, analyzed and integrated data collecting methodologies on factors related to farmer maintenance of genetic diversity. These include socioeconomic and cultural issues, the dynamics of genetic populations, environmental selection factors, agromorphological character description and seed/germplasm exchange and storage systems. The report of this meeting, to be published in 1998, includes an analysis of measures to support the continued production and use of local cultivars, including changes in national agricultural policy, participatory plant breeding and other market or non-market value-adding activities. One important outcome of the meeting was the agreement between participants on the use of standard units of measurement and research methodologies, which will greatly facilitate the sharing of information and the scope of project impact.

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ECP/GR *Prunus* Working Group and Gen/Res 61 Meeting



An extraordinary meeting of the ECP/GR *Prunus* Working Group was held jointly with the Second Coordination Meeting of the EU Project Gen/Res 61 at the 'Servicio de Investigacion Agroalimentaria' (SIA), 13-15 November 1997 in Zaragoza, Spain. The structure of a new searchable European *Prunus* Database (EPDB) was presented by Dr A. Zanetto, Institut National de la Recherche Agronomique (INRA), Bordeaux, France. The list of passport, specific characterization and evaluation descriptors to be used in the EPDB is now complete.

By the end of 1998, all passport data and specific descriptor data of the majority of European accessions will be included in the database. Internet access will be facilitated through the European Information Platform on Crop Genetic Resources (see page 1). A report of the activities carried out in non EU countries with partial support from IPGRI (see Issue 9), demonstrated the complementary

nature of the ECP/GR and Gen/Res activities on *Prunus*.

The concept of a 'European *Prunus* collection' was discussed and the Group agreed upon the value of defining a decentralized collection, made up of *Prunus* accessions that European genebanks would agree to maintain on behalf of all ECP/GR member countries. This would ensure safe and cost effective conservation, a reduced workload for each country and continued access to the genetic material.

Dr P. Arós of Institut de Recerca i Tecnologia Agroalimentàries (IRTA), Cabrils, Spain, reported on the results of an EU funded *Prunus* project in which a map of 250 molecular markers has been developed. Results from this are now making it possible to fingerprint cultivars. The Group acknowledged that the inclusion of molecular data in the database should be a target for the near future. A report of the meeting and a list of descriptors will soon be available from IPGRI.

Ad hoc meeting of the ECP/GR Group on Umbellifers

Activities on genetic resources of nine genera of the family Umbelliferae (*Anethum*, *Apium*, *Carum*, *Chaerophyllum*, *Coriandrum*, *Daucus*, *Foeniculum*, *Pastinaca* and *Petroselinum*) will be the focus of a new ECP/GR Group on Umbellifers. This wide scope of interest was defined by 17 participants, representing 13 ECP/GR countries during an *ad hoc* meeting on *Daucus* genetic resources, held 31 August 1997 in Poland. This meeting was held jointly with the V Meeting of the EUCARPIA Carrot Working Group, hosted by the Department of Genetics, Plant Breeding and Seed Production of the University of Agriculture, Kraków.

A European Umbellifers Database will be developed under the management of Horticulture Research International (HRI), Wellesbourne, UK. The IPGRI/FAO Multi-crop Passport Descriptors will be used for data exchange and further characterization and evaluation descriptors will be elaborated by sub-groups.



Participants at the *Daucus* meeting (Photo: M. Kolasinski)

Collaborative efforts on the regeneration of landraces and old varieties of carrot were offered by several institutes in response to a specific request for help made by the Russian participant from the N. I. Vavilov Institute of Plant Industry (VIR). The urgency of organizing collecting expeditions to fill gaps in the European Umbelliferae collections was also emphasized. This need will be highlighted in the project proposal to be submitted by members of this Group to the third call of EC 1467/94. A *Daucus* collecting

expedition in 1999-2000 is being organized by Dr P. Simon of the United States Department of Agriculture (USDA) in southeast Europe, and members of the Group were invited to join this effort. Several areas of potential collaboration were also identified, including safety-duplication, taxonomical investigations and molecular marker studies.

The Group recommended that the Steering Committee of ECP/GR formally endorse the establishment of a standing Umbellifers Working Group.

Sixth meeting of the ECP/GR *Allium* Working Group



Allium altaicum Pallas, compact with shortened, robust leaves, is one of the endangered *Allium* species from West Siberia. This edible relative to *A. fistulosum* has been collected by the Altai people for its medicinal and culinary properties, and occasionally cultivated for its high vitamin C content. Due to its decorative appearance, it was used for planting on the roofs of primitive huts of nomadic Altaians and frequently planted in their burial grounds. The above example originates from High Altai - Chita Region, collected by E. G. Grinberg, and is duplicated in the *Allium* field collection at Olomouc, Czech Republic. (Photo: P. Havránek).

The complete revision of descriptors for *Allium* is now in an advanced stage thanks to the efforts of the ECP/GR *Allium* Working Group to define appropriate minimum characterization descriptors for onion, garlic, leek, shallot and chives in the European *Allium* Database (EADB) and the agreed use of the IPGRI/FAO Multi-crop Passport Descriptors. During the sixth meeting of the Working Group, held 23-25 October 1997 in Plovdiv, Bulgaria, it was agreed that the European Union (EU) *Allium* project (Gen/Res 20), which funds the EU member countries of the Group, has the same objectives as the wider ECP/GR Working Group. Since these efforts are complementary, the integration of the two projects will enable the rapid development of the EADB.

These data will be made available on the Internet by Horticultural Research International (HRI), Wellesbourne, UK and facilitated through the European Information Platform on Crop Genetic Resources (see page 1). An agreement between the Gen/Res 20 Coordinator, ECP/GR and the Research Institute of Vegetable Crops, Skierniewice, Poland enabled a Polish *in vitro* specialist to be based at the Institut für Pflanzengenetik und Kulturpflanzenforschung (IPK) Gatersleben

for six months to collaborate in the development of *Allium* cryopreservation techniques using Polish garlic accessions. It is expected that with the expertise gained through this collaboration a laboratory will be developed for *in vitro* conservation and ultimately cryopreservation of the garlic collection at Skierniewice, Poland.

The value of the European field collections of long and short-day *Allium* was stressed, along with the important taxonomic collection at IPK and the decorative *Allium* collection maintained in Israel. A lack of available funds is still a major constraint for the genebanks, particularly when regeneration of wild taxa is needed. A commitment was made to safety duplicating seed material under formal bilateral agreements, and several genebanks offered space for 'black boxes'. A formal exchange of vegetative material between countries for safety-duplication reasons still requires the appropriate mechanisms to guarantee safe and disease free movement.

The Group stressed the need to support the broad application of developed molecular marker techniques to characterize the collections and to rationalize them with the elimination of identifiable duplicates. The report of this meeting will be published in 1998.

Extraordinary ECP/GR Meeting and ISHS Symposium on *Brassica*

The European *Brassica* Database (Bras-EDB) is now available for downloading from the Internet via the European Information Platform on Crop Genetic Resources (see page 1) or directly from the site of the Centre for Genetic Resources the Netherlands (CGN) (<http://www.bib.wau.nl/cgn/brasedb>).

An on-line demonstration of the Bras-EDB was given by Dr I. W. Boukema, CGN, during the International Society for Horticultural Science (ISHS) Symposium on *Brassica*, held 23-27 September 1997 in Rennes, France. In the same session, an overview of the six years of activities of the ECP/GR *Brassica* Working Group was

given by the ECP/GR Coordinator, Mr L. Maggioni. During this six year period, the Bras-EDB has been developed and now includes data for around 13 000 accessions, distributed in 20 countries. Bras-EDB has become an essential tool for the rational management and utilization of the collections, and it was also instrumental in the establishment of a *B. oleracea* core collection.

An extraordinary meeting of the ECP/GR *Brassica* Working Group attended by representatives from 12 ECP/GR member countries was held in Rennes prior to the ISHS Symposium. The Group decided to use the IPGRI/FAO Multi-crop Passport

Descriptors and a minimum list of characterization descriptors. In view of the third call for proposals of EC 1467/94, a project proposal aimed at evaluating accessions belonging to core collections of *B. oleracea*, *B. napus* and *B. rapa* in different European locations will be coordinated by CGN. A commitment to establish formal agreements for safety-duplication of accessions was also made and several institutes offered space for 'black boxes' in their genebanks. A compilation of the existing regeneration practices in genebanks will be prepared by the Nordic Gene Bank (NGB). A report of this meeting will be available in 1998.

Update on databases for *Avena* and *Beta*



Improving the access to information on plant genetic resources collections is a major objective of the ECP/GR and the EU 1467/94 programmes. The International Database for *Beta* (IDBB) and the ECP/GR *Avena* Database (EADB) are now available on the Internet (for URL see below). Access to these databases has also been improved through the development of a home page in English at the Federal Centre for Breeding Research on Cultivated Plants (BAZ) Gene Bank, Braunschweig, Germany.

It is now possible to download the passport data of both databases from the Internet or to search the databases on-

line. The on-line versions have been established in close cooperation between the BAZ Gene Bank and the Information Centre for Genetic Resources (IGR) at the Centre for Agricultural Documentation and Information (ZADI), Bonn, Germany. The on-line version of the databases have the advantage of predefined searches as well as the possibility to work in an expert search mode.

The IDBB functions as the central crop database of the World Beta Network (WBN) organisation. The IDBB has been available in an on-line searchable version on the Internet since June 1997. Due to its small size, this database is also available to download. The database was developed between 1987-1991 in close cooperation between the Centre for Genetic Resources, the Netherlands (CGN), Wageningen and the former Braunschweig Genetic Resources Collection (BGRC). Today, the IDBB is maintained at the BAZ Gene Bank. It contains passport data on 9469 accessions from 28 genebank collections located mainly in Europe, the USA and Asian countries.

The *Avena* database, now maintained by the BAZ Gene Bank, was established at BGRC, Germany, on the initiative of ECP/GR in 1984. The database comprises passport data of 19 315 accessions representing *Avena* collections from 20 European contributors. The structure of the database has been converted to comply with the guidelines of the IPGRI/FAO Multi-crop Passport Descriptor list. An update of the database is planned soon.

Further information about these databases may be obtained from Mr S. Bücken, the BAZ Gene Bank documentation officer, or directly from the BAZ Gene Bank homepage (<http://www.fal.de/bgrc/bgrc-e.html>). Both are accessible via Gen/Res (<http://www.dainet.de/genres/beta> and www.dainet.de/eccdb/avena), the European Information Platform (<http://www.cgiar.org/ecpgr/platform>) and the home page of the BAZ Gene Bank.

Gen/Res 81: Grapevine genetic resources

From 1-3 July 1997 the first meeting of the European Union (EU) project on the development of a 'European Network for Grapevine Genetic Resources Conservation and Characterization' (Gen/Res 81) was held at the Institute for Grapevine Breeding Geilweilerhof, Siebeldingen, Germany. Of the 15 project partners from some ten countries including Austria, Bulgaria, France, Germany, Greece, Hungary, Italy, Portugal, Spain, Switzerland, 13 participated in the Workshop.

Discussions focused upon issues relating to the European Grapevine Database which is to be established within the next five years and will include 23 000 accessions of the 15 partners. Specific issues covered include database design, passport data, selection and the definition of the primary descriptors to be applied, choice of the cultivars and distribution of the results.

The outcomes of the workshop included agreement on the definition of the database structure, definition of a common format for data exchange and accession status within the database and for data recording. More specifically, definition and application of 31 ampelographic and 22 ampelometric primary descriptors for the description of rare autochthonous and misnamed

cultivars was agreed upon, and the use of two isoenzymes, phosphoglucosomerase (PGI) and phosphoglucumutase (PGM), Randomly Amplified Polymorphic DNA (RAPD) and microsatellites to confirm hypotheses. All the specific accession data recorded within the next five years will be registered in the database. The German Centre for Agricultural Documentation and Information/Information Centre for Genetic Resources (ZADI/IGR) which assisted in the workshop will establish an Internet site for the Gen/Res 081 project available as a platform for information on current activities (<http://www.dainet.de/genres/vitis>). ZADI/IGR will also assist in formatting the European database and make it available as an on-line retrievable database on the Internet.

The publication of the European Grapevine Database, including the passport data of the 23 000 accessions via Internet and the publication of the primary descriptor list both via Internet and as hardcopy were noted as the major achievements of the first year of this project.

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Central Asian countries join forces

At the establishment of the Central Asian Network on Plant Genetic Resources (CAN/PGR), October 1996 in Tashkent, Uzbekistan, five Working Groups were set up (see Issue 9, page 10).

This Working Group on Forest Genetic Resources (FGR) met for the first time 21-23 August 1997 in Bishkek, Kyrgyzstan. The meeting was organized jointly with the Forest and Walnut Research Institut and the Swiss Support Programme to the Kyrgyz Forestry Sector. The link with the Swiss programme helps to focus on incorporating genetic concerns into forestry practice and overall forest management plans in the five Newly Independent States of Central Asia, a major concern throughout the region.

Forests in Central Asia are unevenly distributed and cover a low proportion of area in the five countries (average forest cover is less than 5%). Despite this, forest stands fulfil very important ecological and socioeconomic functions, particularly as a source of income for local people. Mountain forests are formed by a number of coniferous and broadleaved species which grow in a very wide ecological amplitude (arborescent junipers and spruce forests of *Picea schrenkiana* are dominant). FGR threatened at the species level include *Abies semenovii*, an endemic for which there are few trees surviving in the wild. In large areas of Central Asia, the forest land is concentrated in arid zones where forests provide valuable pasture lands.

The region is particularly rich in wild resources of fruit and nut trees. The natural forests occurring at an altitude range of 800-2000 m in the Tian Shan mountains are characterized by well differentiated stands composed of walnut (*Juglans regia*), with *Pistacia vera*, *Amygdalus*, *Malus*, *Prunus*, *Crataegus*, *Ribes* and many other shrubs in the understorey. According to the Forest and Walnut Research Institute in Kyrgyzstan, more than 130 woody plant species are found in this ecosystem. These forests also provide a habitat for wild relatives of many cultivated plants in one of their main centres of origin.

Basel meeting: Integrating biological and landscape diversity issues

The Pan European Biological and Landscape Diversity Strategy was approved at the Ministerial Conference 'Environment for Europe' on 25 October 1995 in Sofia, Bulgaria. The objective of the strategy is to reduce the current threat to Europe's biological and landscape diversity, to increase its resilience, to strengthen ecological coherence in Europe as a whole, and to ensure full public involvement in the process of conserving biological and landscape diversity.

The strategy is divided into 11 fields of action, including the creation of a coherent European ecological network, sensitizing decision makers and the public at large to the questions of landscape and biological diversity, and those of forest and mountain ecosystems.

The second theme of the strategy, the 'Integration of biological and

landscape diversity considerations into sectors' was the focus of a congress held 22-26 October 1997 in Basel, Switzerland. The purpose of this congress was to prepare the ground for the Fourth Ministerial Conference 'Environment for Europe' scheduled to take place in 1998 in Aarhus, Denmark.

The Congress offered participants a platform for presenting tried and tested approaches to cooperation and conflict resolution. The event focused on the one hand on the question of cooperation between users, authorities, and the commercial and conservation organizations, and on the other, on the theme of partnership between eastern and western Europe. Both of these are central to the achievement of sustainable development and to creating conditions within which humankind and nature can thrive.

Since 1945, a number of protective measures and regulations have been in place, but enforcing these has become very difficult due to the current socioeconomic situation. Grazing and gathering of firewood is unrestricted and almost the complete nut crops are harvested, making the natural regeneration of walnut impossible. Commercial timber harvesting, often by joint venture enterprises with no clear approach to ensuring reproduction of the genetic diversity, is also posing a great risk. Currently, the very low level of financing, organizational restructuring, administrative restrictions, drain of qualified staff into other sectors of the economy and even civil unrest are hindering further development, implementation and effective integration of the existing plans for *in situ* and *ex situ* conservation of FGR.

Participants at the meeting recommended that measures be developed in each of the countries to enhance the research, conservation and sustainable use of the genetic diversity of forest

resources. These efforts should be undertaken through close cooperation among all institutions and agencies involved at a national level. The Working Group also discussed and agreed on common guidelines for building up national programmes on FGR.

The capacities of each country were reviewed, common needs identified and a list of priority species established for regional collaboration. Based on this, the Working Group endorsed and initiated implementation of a workplan. The first task to consolidate information exchange among the five countries and to strengthen the flow of information with other countries will be partially accomplished through the publication of the country presentations and other relevant data in the proceedings of the meeting in early 1998.

Further workplan tasks include developing a common gene conservation methodology for selected species and a database on FGR. The Working Group will meet again in September 1998, in Kazakhstan.

Meetings

Subsidiary Body on Scientific, Technical and Technological Advice

The third meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity (CBD) was held 1-5 September 1997, and immediately preceded the Eighth Global Biodiversity Forum (GBF8) in Montréal, Canada.

With an aquatic theme, the agenda of this meeting focused on many of the decisions and recommendations made at the third session of the Conference of the Parties (COP III) held in November 1996 in Buenos Aires, Argentina. Agenda items included inland water systems, coastal and marine biodiversity, forest biological diversity, agricultural biodiversity, development of criteria and indicators of biological diversity and implementation of the pilot phase of the Clearing House Mechanism (CHM).

The major focus of the meeting was Decision III/13 of COP III which required SBSTTA to report to COP IV on the status and trends of biodiversity in inland water ecosystems and on options for conservation and sustainable use. In response to this, a work programme was developed by a Working Group at the meeting which was adopted by SBSTTA for submission to COP IV.

Another discussion point, much expected by the PGR community, was the decision on Agricultural biodiversity (Decision III/11) made by COP III. This includes the establishment of a programme of activities on agrobiodiversity to maximise the benefits of agricultural practices on biodiversity in agroecosystems; to promote the conservation and sustainable use of genetic resources and to promote the fair

and equitable sharing of benefits arising out of the utilization of genetic resources. Implementation of this decision will be facilitated through FAO-CBD Secretariat collaboration within the framework of a Memorandum of Cooperation.

In response to decision III/12 of COP III on forest biodiversity, SBSTTA recommended a matrix structure for the organization of the work programme to focus on the advancing activities related to research, cooperation and the development of technologies. It was also recommended that there be a three year programme, within which activities are selected according to the interests of the Parties and that these activities are complementary to the Inter-agency Task Force on Forests and future work of the Intergovernmental Forum on Forests.

Decision III/10 of COP III on the identification, Monitoring and Assessment relates to Article 7 of the CBD and recognises the central importance of identifying indicators of biodiversity to ensure that the Conventions objectives are met. It calls for guidance on assessment and indicator methodologies, guidance from SBSTTA on the development of methodologies etc. It was emphasized by SBSTTA that the primary role of indicators is as a tool for the management of biodiversity at a local and national level, and they are not for the purpose of global comparison.

The progress made on the implementation of the CHM which is currently in the pilot phase under the coordination of the Secretariat, was reviewed by SBSTTA. To date, a number of COP decisions have resulted in defining the role of the CHM as a key instrument to promote and facilitate the implementation of all aspects of the Convention. A number of recommendations were made by SBSTTA, including the use of regional workshops to define the needs and priorities, and for an independent review of CHM in 1998. The next SBSTTA meeting will be in September 1998.

National Symposium in Lille, France

The friendly atmosphere at the national meeting 7-10 October 1997 by the Bureau des Ressources Génétiques (BRG) at the Université de Lille, France, promoted lively discussions and debate amongst participants.

The Symposium or *Le Colloque*, served as a forum for reporting on and discussing results of research projects funded by the French Ministries of Research and of the Environment, the Institut National de la Recherche Agronomique (INRA), the Institut Français de Recherche Scientifique pour le Développement en Coopération (ORSTOM) and the Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD). The Symposium brought together a broad range of professionals with an interest in plant genetic resources ranging from researchers, genebank curators, breeders and scientists from the related field of animal and microbial genetic resources. A series of presentations

reflected the diversity of the participants and their interests, ranging from the 'Conservation of bees' to 'Improvement of long-term seed storage methods'.

Workshops discussed many of the parallels and common concerns shared across the fields of crop, forest, animal and microbial genetic resources. The nature and extent of problems in both *ex situ* and *in situ* conservation strategies and techniques were agreed, with different perspectives and strategies coming together to address these problems.

The Symposium also demonstrated how a decentralized national genetic resources programme, involving a wide range of institutes with varying capacities and mandates, can function effectively. Full proceedings of this meeting will be published in the journal supplement of "Genetics Selection Evolution" in 1998.

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Forthcoming Meetings

16 - 20 February 1998

International Conference on Medicinal Plants, Bangalore, India.

12-13 March 1998

Agriculture and the Environment, 100th Anniversary of the Agricultural Institute of Slovenia, Festivalna dvorana, Slovenia.

1-4 April 1998

EUCARPIA International Symposium on Breeding of Protein and Oil Crops, Pontevedra, Spain.

4-15 May 1998

Fourth Session of the Conference of the Parties to the Convention on Biodiversity, Bratislava, Slovakia.

11-17 May 1998

9th OPTIMA Meeting, Paris, France.

2-4 June 1998

Third Ministerial Conference on the Protection of Forests in Europe, Lisbon, Portugal.

9-13 June 1998

The 2nd Planta Europa Conference, Uppsala, Sweden.

17-19 June 1998

ISHS-ASHS World Conference on Horticultural Research, Rome, Italy.

22-24 June 1998

Bast Fibrous Plants Today and Tomorrow, St Petersburg, Russia.

28 June - 2 July 1998

European Society for Agronomy, Fifth Congress, Nitra, Slovakia.

28 June-6 July 1998

ECP/GR Steering Committee Meeting and European Symposium on PGRFA, Braunschweig, Germany.

7-11 July 1998

Cereals for Human Health and Preventative Nutrition, Brno, Czech Republic.

20-26 July 1998

3rd International Symposium on the Taxonomy of Cultivated Plants, Edinburgh, Scotland, UK.

2-7 August 1998

XXV International Horticultural Congress, Brussels, Belgium.

9-16 August 1998

7th International Congress of Plant Pathology, Edinburgh, Scotland, UK.

10-15 August 1998

VII IOPB Symposium: Evolution in Man-Made Habitats, Amsterdam, the Netherlands.

7-11 September 1998

X EUCARPIA Meeting on Genetics and Breeding of *Capsicum* and Eggplant, Avignon, France.

21-25 September 1998

XV EUCARPIA General Congress: Genetics and Breeding for Crop Quality and Resistance, Viterbo, Italy.

14-19 November 1998

3rd European Conference on Grain Legumes, Valladolid, Spain.

January 1999

Sixth International Workshop on Seeds, Merida, Yucatan, Mexico.

Further update on EC 1467/94

Contrary to the announcement made in Issue 11, the current situation regarding the third call for proposals for EC 1467/94 is as follows: On 17 December 1997 the European Parliament votes on the programme budget for 1998. Depending on the outcome of this vote, the call will be made in early 1998 for either shared-cost projects or accompanying measures only, depending on the allocation.

Further information can be obtained from the Secretariat of the Division for the Coordination of Agricultural Research, Commission of the European Communities (DG VI FII3), Brussels, Belgium, Fax: +32-2-2963029 'Attention plant genetic resources'; Email: Richard.Hardwick@dg6.cec.be.

European Symposium on PGRFA

A Regional Symposium will be held in Braunschweig, Germany from 30 June to 4 July 1998 to assess the progress made at the European level in implementing the Global Plan of Action on Plant Genetic Resources for Food and Agriculture (PGRFA) adopted in 1996 in Leipzig, Germany. The aim is to convene delegations from all European countries, including both technical and policy expertise.

Specific objectives of this Symposium are to: identify gaps and weaknesses in the implementation process and recommend solutions; to further enhance and intensify international collaboration and complementarity in the management of PGRFA; to discuss the role of European countries in promoting conservation and sustainable management of PGR in other regions; to provide an input into the

priority setting and planning of initiatives such as ECP/GR and the EC Genetic Resources Programme etc.; to offer an opportunity for interactions and the enhancement of collaboration between the formal sector, private sector and NGOs; and to contribute further to the public awareness about the importance and value of PGRFA.



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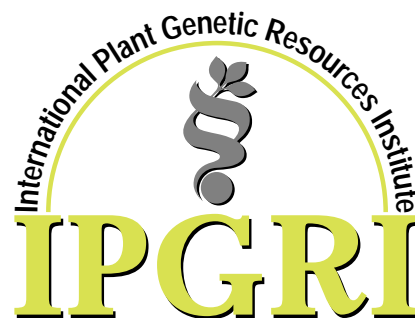
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About this Newsletter

The International Plant Genetic Resources Institute (IPGRI) is one of the 16 Centres of the Consultative Group on International Agricultural Research (CGIAR). IPGRI's goals are to further the study, collection, preservation, documentation, evaluation and utilization of the genetic diversity of useful plants for the benefit of people throughout the world. From its Headquarters in Rome, Italy and its Regional Offices in Benin, China, Colombia, India, Kenya, Malaysia and Syria, IPGRI promotes and coordinates the action needed for the conservation of genetic resources of these plants.

IPGRI publishes 5 Regional Newsletters covering the different regions of the world. They are intended to serve as an informal forum for the exchange of news and views, and to create closer ties between national programme scientists, researchers and other genetic resources workers.

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 13 by 6 March 1998.



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