

Inauguration of Slovak Genebank

The Slovak Republic recently opened its National Genebank at the Research Institute for Plant Production (RIPP), Piestany, four years after separating from the Czech Republic. Equipped with modern processing, documentation and a long-term storage capacity for 60 000 accessions, this genebank is the core element of the Slovak National Programme for collecting, conservation and utilization of PGR, established in 1992.

The National Programme involves 20 institutions active in conserving and utilizing crop genetic resources. The Programme is also developing closer contacts with national institutions involved in forestry and environmental conservation.

During the inauguration ceremony on 14 November 1996, attended by representatives of many national and foreign PGR related institutions, Dr N. Beňuška, State Secretary of the Ministry of Agriculture, said that the genebank illustrates the Slovak Republic's strong commitment to the conservation of biological diversity and to the international agreements it has adhered to, such as the Convention on Biological Diversity and the Global Plan of Action. He emphasized the importance for an independent state to have a functional National Programme for the conservation and utilization of PGR.

During his speech, Dr T. Miština, Director of RIPP, highlighted the importance of regional collaboration in PGR conservation. He thanked FAO and IPGRI for their support in the process leading up to the establishment of the National Programme and gave examples of ongoing international collaboration

involving the Slovak Republic. These include joint collecting activities with neighbouring countries, active participation in Regional Networking programmes, postgraduate training activities and the recently signed agreement with the Czech Republic for the reciprocal safety duplication of the two national base collections.

Although the National genebank is new, Slovak collections of PGR have existed for several years. A national base collection has been temporarily hosted by the Research Institute of Crop Production (RICP), Prague, Czech Republic. Contracts also exist between RIPP and other members of the Slovak National Programme to duplicate active collections to the base collection. This is particularly important for collections held in breeding institutes which have recently been privatized or for which privatization plans exist. As of 1 January 1997, Dr F. Debre will succeed Dr A. Zofajova as national coordinator for crop genetic resources and head of the genebank.



New Slovak genebank, Piestany (photo: F. Debre)

COP meet again

The third session of the Conference of the Parties to the Convention on Biological Diversity (COP3/CBD) took place in Buenos Aires, Argentina 4-15 November 1996. As its decisions testify, COP3 has shown determination and self-assertiveness in number of strategic issues e.g. finalizing a Memorandum of Understanding that asserts its authority over the Global Environment Facility (GEF), focusing its medium-term work programme and initiating its own action programme on agrobiodiversity, on forest biological resources, and agreeing to hold an inter sessional workshop on the implementation of Article 8(j) (re. rights of indigenous peoples and local communities).

The COP welcomed the contribution of the Global Plan of Action (GPA) adopted in Leipzig to the implementation of the CBD and endorsed its priorities and policy recommendations. It called for the effective and speedy revision of the International Undertaking (IU) to be in harmony with the CBD and is willing to consider a future decision by the Commission on Genetic Resources for Food and Agriculture (CGRFA) that the revised IU should become a protocol to the CBD. The COP encouraged parties to develop national programmes focusing on key elements of the GPA such as increasing the range of genetic variability available to farmers and promoting the use of underutilized crops.

The CBD secretariat will invite FAO, in close collaboration with other relevant international and regional organizations, to further identify and assess ongoing activities at the international level in

(Article continues on page 4...)

Third ECP/GR Brassica Working Group meeting

The third ECP/GR Brassica Working Group meeting was held 27-29 November 1996 in Rome, Italy. Participants discussed the recommendations of the documentation workshop held in Budapest, Hungary, and agreed to use the FAO/IPGRI multi-crop passport descriptors as a standard format for data exchange. The recommendation that characterization and evaluation data be included in the European Brassica Database (Bras-EDB) was also considered valid and will be implemented by including data on the minimum characterization descriptors previously agreed upon (see report of the previous meeting in 1994 in Lisbon, Portugal). The upcoming ECP/GR Internet platform will provide a welcome access point to the Bras-EDB.

The status of the Bras-EDB was revised. Recent data additions include collections held in Spain and Belgium. Updated datasets for the collections in Bulgaria, Poland and Russian Federation

were also provided. A fully updated version of the Bras-EDB should be available by March 1998.

Discussions also focused on the different forms of duplication occurring among Brassica collections. The 'black box' arrangement, whereby the genebank of origin takes responsibility for the quality and regeneration of the stored material was seen as the most effective method for safety duplication. Within arrangements of this type, the genebank hosting the safety duplicate does not distribute the material. An initial list of genebanks offering storage space for safety duplicates was compiled and bilateral agreements for the implementation of this practice were encouraged.

Several studies on regeneration and rationalization measures were presented, highlighting the need for more research and the establishment of guidelines in order to minimize the workload in the genebanks, and to ensure the maintenance of the original genetic

diversity during the regeneration procedure.

An observer invited from the University of Palermo, Italy, illustrated how the Department of Botany is proposing management plans for *in situ* conservation of the Sicilian wild species within the existing protected areas. It was stressed that any initiative in this area should first be promoted by Italian scientific institutions. The inclusion of *B. villosa* and *B. rupestris* into the list of protected plants of the Bern Convention is still pending.

It was agreed to re-submit the Brassica genetic resources project to the EU 1467/94 genetic resources programme, if a third call for proposals is published.

An extraordinary follow-up meeting of the Group will be held on the occasion of the next Symposium on Brassica of the International Society for Horticultural Science (ISHS) scheduled 23-27 September 1997 in Rennes, France.

GEN RES 61 and ECP/GR Prunus Working Group meeting

On 28-30 October 1996, an extraordinary meeting of the ECP/GR Prunus Working Group was held jointly with the First Coordination Meeting of the EU Project GEN RES 61 at the Istituto Sperimentale per la Frutticoltura in Rome, Italy. The meeting was attended by representatives of the EU project partners and the ECP/GR Working Group members. The principal objective of the meeting was to discuss the priority descriptors for inclusion in the European Prunus Database (EPDB).

Besides the passport descriptors already agreed upon in the previous meeting in February 1996 in Izmir,

Turkey, the Group agreed to integrate into the EPDB, as a second priority, the FAO/IPGRI Multi-Crop Passport Descriptor List recently adopted during the ECP/GR Documentation workshop in October 1996 in Budapest, Hungary (see page 3). In addition to the revision and approval of a full list of common minimum characterization descriptors for Prunus, a list of minimum characterization descriptors specific to each crop was accepted and reference cultivars were revised accordingly.

Five different taskforces were defined to further elaborate almond, apricot, cherry, peach and plum priority evaluation descriptors. These will reach a consolidated proposal to be presented at the respective symposia of the International Society for Horticultural Science (ISHS) in 1997. At the Groupe de Recherches et d'Etudes Méditerranéen sur l'Amandier (GREMPA) meeting in October 1996 in Meknes, Morocco, a comprehensive revision of the IPGRI Almond Descriptors

through appropriate contacts with crop experts was initiated. This was welcomed and considered relevant for collaboration with the whole ECP/GR Group.

On 29 October 1996 GEN RES 61 partners met separately in order to report on the progress of the project and set deadlines for next year, while non-EU representatives discussed complementary activities, such as transferring available data to the EPDB and carrying out some characterization and evaluation of original material, according to a minimum set of descriptors and a few agronomic traits for which they can offer specific expertise. Funds from IPGRI will cover part of these activities. A report of the meeting, and a detailed list of the revised descriptors will soon be available from IPGRI.

The Second Coordination Meeting of GEN RES 61 will again be held jointly with an extraordinary ECP/GR Working Group meeting, 13-15 November 1997 in Zaragoza, Spain.



The International *Vitis* Database now on the Internet

The International *Vitis* Database compiled by Dr E. Dettweiler and Dr R. Eibach from the Institute for Grapevine Breeding Geilweilerhof, Federal Centre for Breeding Research on Cultivated Plants (BAZ) is now available on the Internet. This contains passport data of about 16 000 accessions of grapevine, including common names, synonyms, country of origin, pedigree and holding institutions. Characterization and preliminary evaluation data are available for descriptors of young and mature leaves, shoots, inflorescence, berries and seed. For some accessions additional information is supplied by colour pictures of leaves, clusters and shoots. Evaluation data are given for 13 relevant disease descriptors with bibliographical references. Information is available on ampelography (307 entries), bibliography (556 entries) and grapevine collections worldwide (126 institutions/38 countries).

The online version of the database was developed by the Information Centre for Genetic Resources (<http://www.dainet/genres/genres.htm>) at the Centre for Agricultural Documentation and Information (ZADI) using the original dBase database. Access to the database is available via Internet (<http://www.dainet.de/genres/vitis/vitis.htm>) and queries are possible for passport, characterization and evaluation descriptors, for holding institutions, for bibliography and for pictures. Special search assistant forms facilitate a simple query on single descriptors. By using a general search form, queries combining several descriptors can be submitted. Descriptor fields are linked to additional information on methods and scales used for the determination of the characters.

A brief summary of the database (about 10 000 grapevine accessions with common names, information on



berry colour and bibliography references) together with a list of countries, including the number of holding institutions per country is also available for downloading. The passport data of the International *Vitis* Database can also be ordered as a hardcopy or on diskette. Further information can be obtained from Dr E. Dettweiler, Institute for Grapevine Breeding Geilweilerhof, D-76833 Siebeldingen, Germany, tel: +49-6345-410, fax: +49-6345-41177.

Central crop databases: tools for PGR management

At present, access to European crop genetic resources collections and a broad outline of their content is facilitated by a large number of crop specific regional databases. The majority of these Central Crop Databases (CCDB) have been established within the framework of ECP/GR, while a number of them have a broader international or global scope (e.g. the International Database for *Beta* and the International *Vitis* Database). Others form part of other regional collaborative programmes such as ESCORENA (e.g. The European Sunflower Database and the Flax Database).

A technical workshop, organized by the Centre for Genetic Resources, the Netherlands (CGN) and IPGRI, entitled 'Central crop databases, tools in plant genetic resources management' took place 13-16 October 1996 in Budapest, Hungary. It was attended by 55 participants from 26 countries representing most of the European CCDBs, a number of institutions specializing in PGR documentation

technology and international organizations. Discussions at the Workshop focused on the following issues:

- the role of Central Crop Databases (CCDBs);
- the standardization of CCDBs;
- the inclusion of evaluation data in CCDBs;
- the role of database managers;
- the facilitation of access to CCDBs.

While noting that the CCDBs will continue to be a key tool for the management of collections by the crop specific working groups or individual curators, the Workshop recognized the need to focus the activities and development of CCDBs more towards the needs of the end users (breeders, research institutions, education establishments and others). The Workshop adopted a slightly revised version of a FAO/IPGRI Multi-Crop Passport Descriptor List as a standard exchange format for data transfers in the region. FAO will establish a standard list

of institute codes for this purpose. This standardization is expected to reduce the workload associated with the data transfers to CCDBs and to enhance the usefulness of the CCDBs.

The Workshop recommended that evaluation data be included into the CCDBs to better meet the needs of users and to facilitate access to the collections.

In order to make the CCDBs widely accessible and to make full use of the opportunities given by recent developments in communication and computer technology, the Workshop decided to establish an Internet based information platform through which all the CCDBs would eventually be accessible. This system, which will be established within the framework of the ECP/GR Information and Documentation Network, will also provide access to data about National Programmes and a number of relevant information services. It is considered an important step to implement the 'Global Plan of Action' adopted in June 1996 in Leipzig, Germany, at the European level.

Reorganization of BGRC

As of 1 June 1996, the Braunschweig Genetic Resources Collection (BGRC) located at the Institute of Crop Sciences of the Federal Agricultural Research Centre Braunschweig-Voelkenrode (FAL) is headed by the Federal Centre for Breeding Research on Cultivated Plants (BAZ) at Quedlinburg. Since breeding research is no longer part of FAL's programme, it seemed rational to link the PGR activities with the recently founded BAZ. For the next five

years, one senior scientist supported by a scientist employed on a temporary contract basis and six technicians will be managing a collection of more than 53 000 accessions. The short-term goals of the BGRC include the maintenance of basic seed and *in vitro* regeneration and conservation activities, characterization, seed exchange and data documentation within the limits of available funds and staff resources. The integration of the BGRC into a breeding research centre is

considered as a first measure aiming at improving the national programme on research, evaluation, conservation and utilization of PGR. BAZ has accepted the scientific and administrative responsibility for the BGRC which, as in the past, is functioning as a working group at FAL. It is not intended to move the BGRC to Quedlinburg. All requests for information and seed should be sent to Dr L. Frese, Federal Centre for Breeding Research on Cultivated Plants (BAZ), Genebank - Braunschweig Genetic Resources Collection (BGRC), Bundesallee 50 D-38116, Braunschweig, Germany, Tel: +49-531-596617; Fax: +49-531-596365; Email: frese@pf.fal.de.

Dr L. Seidewitz, the documentation officer at BGRC retired in May 1996 after 26 years, which included pioneering work on computerized data documentation systems for PGR and the development of a scientific system of plant descriptors and descriptor states for major European crops. Today, these underlying basic principles are applied all over the world in the compilation of new descriptor lists. Dr Seidewitz also managed the seed exchange between BGRC and its counterparts in Germany and abroad for many years, and is well known by the international PGR community. More than one decade ago, Dr Seidewitz had a vision of a worldwide network of documentation systems with online access facilities. For this purpose, the BGRC database was designed as a bilingual system, and requests can be answered in both English and German. Initially, fulfilment of this vision seemed to be unrealistic due to the lack of the appropriate information technology, but before he retired from the Institute, this vision became a reality. Dr Seidewitz retires from PGR work to dedicate his future to his family and music. What more can one wish for after 26 years of purposeful work?

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COP meet again (continued from page 1)

areas such as land and water resources, plant, animal and microbial genetic resources, wildlife, agroforestry and traditional knowledge. The results of this assessment will contribute to setting programme priorities by the COP.

A multi-year programme will be established to address the impacts of agricultural practices on agro-ecosystems, as well as their interface with other ecosystems. This programme will include aspects of promoting fair and equitable sharing of benefits arising out of the utilization of genetic resources.

In preparation for COP4, scheduled 4-15 May 1998 in Bratislava, Slovak Republic, the CBD Secretariat is seeking information on legislative and policy measures and research activities covered under Article 15 (access and benefit-sharing). Furthermore, the Secretariat is to cooperate closely with the World Trade Organization through the committee on trade and environment, to explore possible links between Article 15 of the CBD and the relevant articles of the TRIPS agreement on intellectual property rights (IPR). It encourages case studies on the impact of IPRs on the objectives of the CBD.

Regarding forestry, the COP decision states that "some forests" can play a crucial role in conserving biodiversity and that the CBD will work in a complementary way with the Intergovernmental Panel on Forests (IPF) and other forest-related fora. It endorses that the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) should limit its initial work on forestry to devising methodologies for the development of criteria and indicators to sustainable forest management and the analysis of the impact of human activities on the loss of forest biological diversity.

Parties were urged to include both *in situ* and *ex situ* conservation measures and the sharing of benefits from use of genetic resources in their national plans. The first national reports, which should focus on implementing Article 6 of the CBD, must be submitted to the Secretariat by 1 January 1998. The COP requested GEF to make resources available for this.

Regarding the monitoring of biological diversity, COP called for the development of indicators and for increased capacity building, especially in taxonomy and other related areas. The Biosafety working group will complete a protocol on biosafety by 1998. The importance of capacity building in biosafety was endorsed. The Netherlands will organise a workshop during the first half of 1997 to coordinate the agrobiodiversity programme activities between the CGRFA and the CBD Secretariat. Information on the two other PGR policy related events can be obtained from the relevant Internet sites: The fifth session of the Global Biodiversity Forum (GBF 5), 1-3 Nov. 1996, Buenos Aires, Argentina (<http://www.wri.org:80/wri/biodiv/gbf>). The second extraordinary meeting of the CGRFA, 9-13 Dec. 1996, Rome, Italy (<http://web.icppgr.fao.org>).

Sustainable forest genetic resources in the former USSR



Participants at the workshop in Belovezhskaya Pushcha, Belarus.

The immense forests in the former USSR represent one of the last genuine reservoirs of biological diversity and a critical factor for the stability of the global climate. For many Newly Independent States (NIS), forests provide an essential basis for national development in the transitory period towards market oriented economies. In contrast to western and central Europe, the vast forest stands in Siberia, the Caucasus, Urals and other regions were influenced far less by intensive forest management in the past and are thus characterized by a high proportion of well preserved natural composition and structure. The forest decline caused by industrial pollution is one of the many serious threats faced today; inadequate forestry planning, lack of legislation and ineffective overall forest management pose other major threats. The restricted financial possibilities and constant social and political changes in these countries bring many risks, and international commitment is needed to ensure the conservation and better use of Forest Genetic Resources (FGR).

IPGRI has steadily increased its interactions with countries of the former USSR during recent years, assembled substantial information and proposed a series of milestones to be reached in the process of development of sustainable FGR programmes. A contribution to this long-term regional collaboration strategy was the organization of a workshop 23-27 September 1996 in Belovezhskaya Pushcha, Belarus. Attended by 35 participants from nine NIS, the Workshop was organized locally by staff of the Forestry Institute of Belarus.

Prior to the breakup of USSR, all FGR related activities were coordinated from a centrally mandated institute. It was recognized by the majority of the participants that coordination of activities on FGR should now be established or strengthened at a national level and close links developed between them. The basic building block should be well functioning national programmes with defined objectives and structure. One of

the recommendations endorsed during the final session requested each country to nominate a coordinating institute, or to set up a coordinating committee for the national programme. Such committees should ideally include representatives of all relevant ministries and organizations. The already existing Council on Forest Genetics, Breeding and Tree Seed Technology of the Federal Forest Service of Russia, for instance, will act as the coordinating agency in the country. This includes a strong component of institutes representing all the Federation's regions. In the Ukraine, a framework for a comprehensive national programme has already been created and a national coordinating centre composed of forest research institutes established. This programme will closely cooperate with the national programme of Moldova, for the tasks common to both countries.

Training was seen as an essential element in support of national programmes. The main target groups for training include young scientists and forest officers that will be expected to take responsibility for forest gene conservation in the medium term. Special courses and curricula about FGR should be included in programmes for forestry faculties and schools.

Participants recommended that action be taken to raise awareness about the need to conserve FGR. This should be undertaken at a national level with policy makers, forestry authorities and the general public, supported by the international community wherever possible.

The information flow among national programmes should be strengthened through active international collaboration. Participants expressed a wish to join the existing European networks, such as EUFORGEN. Sub-regional collaboration was considered very important and should be strengthened.

A number of possible collaborative projects were proposed at the Workshop. These focus on collaboration among the NIS, and between these and western and central European countries. These projects are currently being submitted to a variety of donors and funding agencies.

Third meeting of the *Populus nigra* Network

Prior to the establishment of this Network, the Advisory Committee of Strasbourg Resolution 2 stated in February 1993 that:

“Following the recommendations of the International Poplar Commission meeting, and in the framework of the Strasbourg Resolution 2, European countries will collaborate in a conservation network on Populus nigra. To define an in situ conservation strategy will probably not be easy for this species, because:

- the riparian sites are much disturbed by human activity;
- interspecific hybrids are cultivated in the ecological zone of natural stands;
- this ecological zone is largely open to gene flow through seeds or pollen.

The already existing ex situ conservation programmes will be coordinated. The participants will also initiate in situ conservation network based on the present knowledge.”

Following the recent third Network meeting held 5-7 October 1996 in Sárvár, Hungary, the following conclusions can be drawn: (1) a fair level of coordination has been achieved whenever the scientific basis for genetic conservation was available, in particular for *ex situ* strategies; (2) collaborative work with shared responsibilities is emerging and new participants agree with the workplan developed so far; and (3) constructive discussion is in progress for the concerns that still need research work, in particular the practical management of *in situ* conservation of genetic diversity.

Ten practical achievements include:

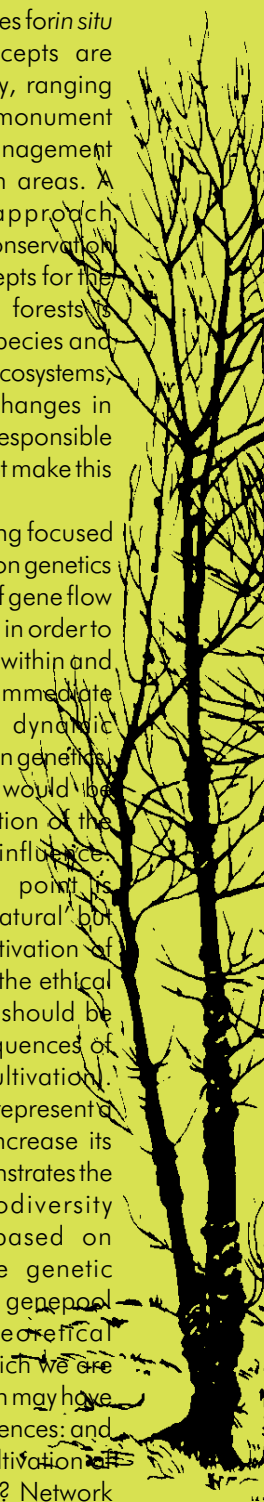
- Sixteen countries have contributed knowledge and information to the Network so far, and comprehensive national reports have been published. A synthesis of *in situ* conservation measures is being prepared;
- for inventories in the field the Identification Sheet seems to be very *pop(u)lar* and is practically used to detect possible introgressive forms;

- for *ex situ* collections, practical guidelines for safe conservation in the field and in seedbanks have been developed and published;
- a database of European collections has been established, including passport data, and will be updated annually. Prior to this Network meeting, 1650 clones from five countries had been recorded in the database, enabling the detection of duplicates among collections and the identification of accessions;
- for the characterization of national collections, a standardized list of morpho-physiological descriptors was published and a set of 15 reference clones from unique stoolbeds exchanged among the participants;
- a core collection of native *P. nigra* is under preparation. 15 countries provided clones and others are expected to join - not only from Europe, but from the whole distribution range. This collection will later be sent to all participants as a common set of reference clones for evaluation of national collections;
- a bibliography related to *P. nigra* genetic conservation is annually updated;
- for public awareness, which is considered a very important objective, audio-visual aids have been prepared on the basis of slides and videos contributed by the Network participants;
- research priorities were defined and a joint proposal submitted for funding;
- a number of other practical outcomes resulting from research undertaken by the Network participants are currently under preparation.

According to the latest national reports, all these outcomes of the Network seem to be an effective contribution for supporting research and for practical conservation activities in many countries.

An efficient strategy for genetic conservation of black poplar needs to integrate several approaches: *ex situ* and *in situ* conservation and dynamic population management. For the coming years, activities shall focus on the improvement of methodologies for *in situ* conservation. Various concepts are currently part of this strategy, ranging from the concept of ‘natural monument preservation’ to the active management of *in situ* gene conservation areas. A more comprehensive approach, integrating *in situ* and *ex situ* conservation and including effective concepts for the re-establishment of riparian forests, is needed. The biology of the species and the characteristics of riparian ecosystems, as well as the continuous changes in administration of institutions responsible for *in situ* management will not make this task easy.

Discussions at the meeting focused on several aspects of population genetics of the species. The problem of gene flow should be further investigated in order to optimize the sampling efforts within and between stands. Beyond this immediate question of sampling, a dynamic approach including population genetics, demography and ecology would be needed to predict the evolution of the species under anthropic influence. Another major discussion point is introgression, which is not ‘natural’ but occurs in the course of cultivation of exotic hybrid poplars. From the ethical point of view, responsibility should be taken for the genetic consequences of human activity (poplar cultivation). However, introgression may represent a chance for the species to increase its genetic diversity, which demonstrates the debate between the biodiversity conservation approach based on taxonomic units, and the genetic approach which relies on the gene pool evolution. Beyond theoretical discussions, the extent to which we are concerned about introgression may have important economic consequences: and in light of this, should the cultivation of hybrid poplars be regulated? Network



members will focus on finding answers to this and other unresolved questions.

A decision about the broadening of the scope of the Network was postponed to the next meeting, since substantial work has been planned with *Populus nigra*, but it was agreed that future activities could eventually also include *P. alba*.

**Dr F. Lefèvre, Chair &
Dr S.M.G. de Vries, Vice Chair
Populus nigra Network**



EC1467/94: No call for proposals in 1997

After reducing the funds available to the second call for proposal from 3.5 million ECU to 2.4 million ECU, DG VI has cancelled its 1997 budget request for the European genetic resources programme (EC 1467/94). This has happened despite complaints by a number of member countries that the European Commission is not allocating sufficient means to the conservation of genetic resources and despite constant pressure by the European Parliament to maintain the previously agreed funding allocations to the programme.

The representatives of the European Parliament have been assured by DG VI that a third call for proposals will be published in 1998. During 1997 the opportunity will be taken to evaluate the programme.

Second *Picea abies* Network meeting

Participants from 17 countries attended the second *Picea abies* (Norway spruce) Network meeting 5–7 September 1996 in Hyytiälä, Finland. Representatives of France, Hungary, Italy, Sweden and Switzerland attending a meeting of this Network for the first time, presented introductory country reports. Both these reports, and the information updates from all other countries highlighted the critical condition of Norway spruce in many areas. The changing climatic conditions, combined with the impact of industrial pollution and biotic pests, may even cause a very rapid change of distribution limits and loss of populations (and their genetic information) particularly at the southern margins of the distribution area.

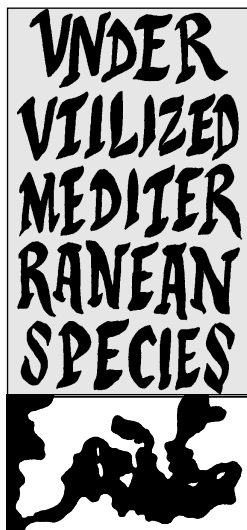
The discussion focused on the development of technical guidelines for the conservation of genetic resources of the species. According to the objectives of the Network, it was agreed to produce practical guidelines, which are often requested by forest officers and national or regional authorities responsible for gene conservation. This decision was facilitated by the fact that Norway spruce is a key species in most national conservation programmes and activities. There is also comparably good knowledge on the genetic variation within and

among populations from the species' whole distribution area in Europe, which has been achieved through provenance experiments and other field trials complemented by a number of genetic studies. These guidelines will be published with the report of this meeting.

To assist in the development of a database for monitoring progress made in the conservation of these genetic resources in Europe, it was agreed at the previous Network meeting in March 1995 (Stará Lesná, Slovakia), that a list of descriptors be developed. Each country would then have its own database with 'passport' data of genetic resources designated for both *in situ* and *ex situ* conservation using the agreed minimum descriptors. The European 'monitoring' database would provide linkage among the national databases and would be hosted by an interested institute. The final version of the list of descriptors prepared by the Network during the period since the last meeting was also presented.

It was agreed that Norway spruce serves as a model species also for other boreal, wind-pollinated conifers with wide distribution areas in Europe. Further needs and priorities of the participating countries to develop additional tasks of this Network will be assessed through a survey in early 1997.

IPGRI descriptor list for pistachio on the way



The UMS *Pistacia* Group called on all its collaborators for a meeting held 15 October 1996 in Meknes, Morocco, organized jointly with the Groupe de Recherches et d'Études Méditerranéennes sur l'Amandier (GREMPA) Conference on Almond and Pistachio. The main objective of this meeting was to review the final draft of the descriptor list prepared by the UMS *Pistacia* Group. During the meeting, 25 experts from 11 countries focused in detail on each of the descriptors that will be used to better characterize and assess the genetic diversity of *Pistacia vera* trees. The discussions were extremely fruitful and lead to the successful completion of the descriptors list which will be published in the standard IPGRI descriptor format. The Group also reviewed and approved other draft descriptor lists referring to all other *Pistacia* species.

The second reason for calling the *Pistacia* Group meeting was to discuss future initiatives of the UMS project in the area of *Pistacia*. Having accomplished the production of the descriptor lists, the

Group would now like to focus its attention on the assessment of genetic diversity of pistachio varieties across the Mediterranean and west Asia. Collaborators agreed to send relevant information on the variability of the most popular varieties cultivated in their country. This study will be facilitated by the availability of the descriptor lists which will allow the standardization of data gathering from each country. The outcome of this survey will be used to present a multi-authored paper at the International Symposium on Pistachio and Almond, which will take place in Davis, USA in summer 1997. Other items on the Agenda of the UMS *Pistacia* Group are molecular investigations of genetic diversity, environmental characterization of pistachio growing areas, and a catalogue of the most popular cultivated varieties. These goals will be pursued in the short to medium-term, and are likely to make an important contribution to the better conservation and more sustainable use of this popular but relatively unresearched crop.

Landscape, cultural and artistic plants as underutilized Mediterranean species

From 7-9 November 1996 the Italian National Research Council (CNR), through its Vegetable Breeding Centre of Portici, Naples and the Agrosilviculture Institute of Porano, Terni held an international consultation meeting in Naples to discuss the possibility of launching a new regional collaboration on PGR. More than 40 scientists from Bulgaria, Cyprus, Germany, Israel, Italy, Jordan, Morocco, Netherlands, Portugal, Slovenia, Spain, Tunisia, and Turkey, gathered to discuss species which are important for reasons other than food security. These plants provide an aesthetic quality to our surroundings while giving protection against erosion to the land. They have inspired generations of painters, poets and other artists throughout history and are part of the cultural heritage of many societies.

The meeting, organized within the framework of the newly established Office for Scientific and Technical Cooperation with Mediterranean Countries (SMED) of CNR, was held to promote collaborative work in this area, with the ultimate goal of safeguarding the diversity and favouring a better utilization of these resources. Participants delivered papers on the richness of these species in their respective countries and the beautiful images projected stressed once again the diversity of the largely underutilized cultivated and wild vegetation of the Mediterranean region. All presentations unanimously called for greater attention in this area and it was proposed to launch a regional collaboration entitled 'Network on Neglected Mediterranean Plant Genetic Resources of Landscape, Cultural and Artistical Value' to tackle

issues related to the conservation and use of these species. CNR gladly offered support to such a Network with regard to annual meetings and training activities, which will be undertaken in Italian Institutions starting in 1997. Additional funds for joint initiatives in this area need to be sought through EU programmes focusing on cooperation with third countries.

The first activity of the Network will be to develop a database on these species to identify priority species. Participants will provide relevant information to build up this database which will be searchable on a key word basis. Information on this network may be obtained from Prof. Luigi Monti, University of Naples, Via Università 100, 80055 Portici, Italy, Tel. +39-81-7752056/7753074/7761646, Fax +39-81-7753579, email: lmonti@unina.it.

Genetic resources of neglected crops

Humanity relies on a wide diversity of cultivated species; at least 5000 species are cultivated for a variety of purposes. Although it is often stated that only a few staples contribute to major food supply, the number is probably underestimated. Agricultural research has traditionally focused on these staples while relatively little attention has been given to 'minor' or underutilized crops, particularly by scientists in developed countries. These crops have, therefore, generally failed to attract much funding for research. Unlike most staples, many of these neglected species are adapted to various marginal conditions such as in the Himalayas, arid areas, salt affected soils, etc. Many crops that are considered neglected on a global level are however, staples on a national or regional level, such as taro, fonio, Andean roots and tubers etc., or contribute significantly to food supply in certain periods.

The limited information available on many of the aspects of neglected crops hinders their development and sustainable conservation. One major factor impeding progress is that information available on germplasm, and in particular on neglected crops, is scattered and not readily accessible (being found in "grey literature" or written in unfamiliar languages). Additionally, the existing knowledge on the potential value of germplasm accessions of neglected crop species is limited.

A three year project entitled 'Genetic resources of neglected crops with good development potential: their conservation, use and breeding status' was initiated by IPGRI in November 1993 and is funded by the Federal Ministry of Economic Cooperation and Development of Germany. This initiative is being undertaken in partnership with the Institute for Plant Genetics and Crop Plant Research (IPK), Gatersleben, Germany and is coordinated by an IPK staff member based at IPGRI Headquarters in Rome. This project and the Italian funded project, entitled 'Underutilized Mediterranean Species' (UMS) are complementary to one another.

The UMS project focuses on a number of selected species indigenous to the Mediterranean region, with a *modus operandi* based around regional networks, coordinated by the project leader with the aim to promote the better conservation and sustainable use of these PGR. The neglected crops project focuses on the assembly and distribution of information on PGR of 25 species worldwide, with the goal of improving the knowledge on these crops originating from many continents. Informal networks have also been initiated for some species, such as Bambara groundnut (*Vigna subterranea*).

Criteria for the selection of the neglected crops were developed in the initial stage of this project and were applied to a preliminary species list. This list was reduced to approximately 25 species in close consultation with crop experts. Of the species selected, 13 have been widely recognized as underutilized, as demonstrated by various publications over the last 20 years. Institutions and/or individual scientists and coordinators were identified for each of the species selected and information has been gathered and compiled in 25 monographs. Titles published so far in the IPGRI series 'Promoting the conservation and use of underutilized

and neglected crops' are listed below.

Simultaneous to the data gathering process, and in close collaboration with the crop coordinators, strategies and concepts for the conservation and use of the gene pools of the selected crop species have also been developed. For most of the species selected, some sort of 'network' activities already existed prior to the project, ranging from regular national/regional conferences to networks at different levels (informal/formal). Information on these activities was gathered from different sources: network newsletters, conference proceedings and announcements, and information from crop experts. The project has promoted and facilitated the further development of these informal or formal networks for the crop gene pool in question. Opportunities to link collaborative efforts with respect to a given crop gene pool with other, preferably germplasm use-oriented and consumption directed activities has been explored and established where possible.

Within the framework of the activities indicated above, IPGRI expects to generate useful information which will help further promote the conservation and use of these neglected crops. For further information contact Dr J. Heller, Visiting Scientist, IPGRI, Rome, Italy.

Project publications

TITLES PUBLISHED:

Physic nut (*Jatropha curcas* L.)
Yam bean (*Pachyrhizus* DC.)
Coriander (*Coriandrum sativum* L.)
Hulled wheats
Niger (*Guizotia abyssinica* (L. f.) Cass.)

FORTHCOMING TITLES:

Chenopodium spp.
Fagopyrum esculentum
Eragrostis tef
Digitaria exilis
Colocasia esculenta
Metroxylon sagu
Andean roots and tubers
Bactris gasipaes
Ceratonia siliqua
Sapotaceae (*Manilkara*,
Pouteria, *Chrysophyllum*)
Tamarindus indica
Irvingia gabonensis

Passiflora spp.
Canarium ovatum
Artocarpus spp.
Carthamus tinctorius
Lupinus spp.
Lathyrus sativus
Vigna subterranea
Origanum sp.
Sechium edule
Solanum nigrum
Cleome gynandra
Abelmoschus manihot

Meetings

In situ conservation meeting



The participants visited Koprülü Kanyon, a protected area which holds important forest tree species.

From 4-9 November 1996 an International Symposium on the *in situ* conservation of PGR was held in Antalya, Turkey. This was sponsored by the Global Environmental Facility (GEF) in collaboration with the Turkish Ministries of Agriculture and Rural Affairs, Forestry, and Environment. The main theme of the symposium was to assess the status of the *in situ* conservation of wild relatives of important crops and forest trees originating in Turkey. Of the 200

delegates attending, half were from Turkey and the others were from over 30 countries, as well as representatives from the World Bank, IPGRI and NGO's.

The symposium was focused around the presentation of the preliminary results from the ongoing GEF funded project on the *in situ* conservation of genetic diversity in Turkey. It was an opportunity for Turkish delegates to share with the rest of the world their ideas and methodologies on *in situ* conservation and to present their draft National Plan for *In Situ* Conservation of Plant Genetic Diversity for discussion with Symposium delegates.

The Symposium sessions included presentations on the current status of genetic diversity in Turkey, ecogeography, distribution and patterns of genetic diversity of wild cereal, legumes, fruits, and forest species, new methods to conserve genetic diversity, management systems of *in situ* conservation of plant species, and data management for *in situ* conservation. Of particular interest were the selection criteria, planning and management strategies for gene management zones (GMZ). An overriding theme that came out in the discussions was the importance of involving local communities in *in situ* conservation.

Although the Symposium focused on wild relatives of useful crop and tree species, there was discussion on the *in situ* conservation of local crop cultivars and the conservation of systems in which natural introgression occurs between crop cultivars and their wild relatives. The meeting prompted extensive discussions between the Turkish participants and representatives from other countries. The importance of *in situ* conservation was highlighted and the need for future action in the region was noted.

Dr D. I. Jarvis
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International workshop on PGR in Central Asia

Following the previous CGIAR policy-level meetings in Central Asia (see Issue 8), the main objective of a Workshop held 28-30 October 1996 was to develop a concrete plan for collaborative activities on PGR in the region. The Workshop built upon the experience previously gained through IPGRI missions to Central Asia and was hosted by the Uzbekistan State Committee on Science and Technology in Tashkent.

While previous knowledge is available in the area of crop genetic resources, the Workshop revealed that there is almost a complete lack of information exchange about the genetic resources of forest trees. Comprehensive country reports were presented at the Workshop. The rich diversity of natural forest communities in Kyrgyzstan and Tajikistan drew great attention from the participants, with alarming news from Kyrgyzstan about uncontrolled clear-cutting of the last indigenous growths of *Juglans regia* in the world. The participants were assured that these actions had been stopped definitively and that a commitment was now made at the government level to preserve and sustainably use these unique forests.

The discussion of plans for further collaboration on PGR clearly indicated that the highest priority be given to the establishment of a regional collaborative

network. This network will be based on the model of WANANET and coordinated by IPGRI's Regional Office for West Asia and North Africa. It was decided that a regional coordination committee be composed of one national coordinator from each of the five countries (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan). The participants agreed on five working groups: field crops (cereals and legumes), range, pasture and forage crops, industrial crops, horticultural crops and forest trees.

A serious task faced by the network will be to ensure access to a sufficiently wide range of genetic diversity of cultivated plants (mainly food crops) within the national programmes. Responsibilities for the maintenance, characterization, evaluation and documentation of germplasm, as well as new collecting of indigenous material would be shared among the participating countries. Training was considered an immediate priority, both in the area of crop and FGR. Links with other parts of the world, including the European networks are essential to facilitate the exchange of information and germplasm and to raise awareness about the need to conserve the unique genetic resources in Central Asia. A similar Workshop is planned for September 1997 in the Caucasus Region.

Forthcoming Meetings

21 - 23 February 1997

An NGO Evaluation of 1996 - Year of Agricultural Biodiversity, Hamburg, Germany.

10 - 12 March 1997

Adaptation of Potato to less favourable environments: Molecular and genetic approaches. European Association for Potato Research and EUCARPIA, Viterbo, Italy.

20 - 22 March 1997

International Conference: Agriculture, Fisheries and Agro-industry in the Mediterranean region with special reference to islands, Valletta, Malta.

4 - 8 May 1997

Third International Triticeae Symposium, Aleppo, Syria.

12-16 May 1997

The Second International Conference on Seed Science and Technology (ICSST), Guangzhou, China.

19 - 23 May 1997

FAO Commission on Genetic Resources for Food and Agriculture, Rome, Italy.

26 - 31 May 1997

ISHS Apricot Symposium, Naoussa, Greece.

4 - 5 June 1997

3rd ENOF workshop: "Resource use in organic farming", Ancona, Italy.

3 - 8 June 1997

IV International Safflower Conference, Bari, Italy.

8 - 19 June 1997

XVIII International Grassland Congress, Manitoba & Saskatchewan, Canada.

22 - 28 June 1997

Sustainable Agriculture for Food, Energy and Industry, Braunschweig, Germany.

23 - 26 June 1997

ISHS Peach Symposium, Bordeaux, France.

25 - 27 June 1997

European Bio '97. First European Bioindustry Congress, Amsterdam, the Netherlands.

7 - 12 July 1997

Forest Products for Sustainable Forestry, Pullman, USA

15 - 18 July 1997

Conference on future forest policy in Europe, Joensuu, Finland.

13 - 19 July 1997

Women, science and development: from indigenous knowledge to new information technologies, Suva, Fiji.

23 - 27 July 1997

ISHS Cherry Symposium, Denmark and Norway.

13 - 16 August 1997

Molecular genetics of forest trees and somatic cell genetics, Quebec, Canada.

17 - 21 August 1997

8th European Congress on Biotechnology, Budapest, Hungary.

21 - 23 August 1997

ISHS Plum and Prune Symposium, Warsaw, Poland.

24 - 29 August 1997

Second International Symposium on Pistachios and Almond. Davis, USA

1 - 5 September 1997

V Meeting of the EUCARPIA Carrot Working Group, Krakow, Poland.

23 - 27 September 1997

ISHS Symposium on Brassicas/Tenth Crucifer Genetics Workshop, Rennes, France.

September 1997

IUFRO Working Party S2.02.11. Norway Spruce breeding and genetic resources. Slovak Republic/Poland.

12 - 17 October 1997

IUFRO Working Party S2.08.05. Genetics of *Quercus*, Pennsylvania, USA.

13 - 22 November 1997

XI World Forestry Congress: Forestry for sustainable development: towards the 21st century, Antalya, Turkey.

1996 - the Year of Agricultural Biodiversity

1996 was a year in which a number of major conferences focusing on key issues relating to agricultural biodiversity were convened. The common issues tackled at these fora at varying degrees and from different perspectives included national sovereignty over genetic resources and the related responsibility to conserve them in the long term, the access to these resources and their sustainable use, and the fair and equitable sharing of benefits resulting from this use.

For many of the conferences, extensive efforts were undertaken prior

to the actual event, such as the 4th International Technical Conference on Plant Genetic Resources (ITC), which was the highlight of a two year preparatory process. The time has now come to translate good intentions and international commitment into national legislation and practical action. From 21-23 February 1997 an international workshop will take place in Hoisbüttel near Hamburg, Germany to review and evaluate the important conferences relating to PGR which took place in 1996 from an NGO perspective. The programme of this workshop will be

based upon the main issues and outcomes arising from the 1996 conferences and other proposals of the workshop participants. One of the aims of the workshop is to evaluate the results from these past meetings, to coordinate current activities in the region and to further strengthen international links among NGOs.

Information relating to the Workshop is available from the organizers BUKO Agro Coordination, Hamburg, Germany, fax: +49-40-3907520, tel: +49-40-392526, email: agros@cl-hh.cl.sub.de.

Publications of Interest

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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 10 by 7 March 1997.



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