

# Report of a Task Force on On-farm Conservation and Management

Third Meeting, 2-3 October 2007, Ljubljana, Slovenia  
L. Maggioni and E. Lipman, *compilers*







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**Bioversity International** is an independent international scientific organization that seeks to improve the well-being of present and future generations of people by enhancing conservation and the deployment of agricultural biodiversity on farms and in forests. It is one of 15 centres supported by the Consultative Group on International Agricultural Research (CGIAR), an association of public and private members who support efforts to mobilize cutting-edge science to reduce hunger and poverty, improve human nutrition and health, and protect the environment. Bioversity has its headquarters in Maccarese, near Rome, Italy, with offices in more than 20 other countries worldwide. The organization operates through four programmes: Diversity for Livelihoods, Understanding and Managing Biodiversity, Global Partnerships, and Commodities for Livelihoods.

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**The European Cooperative Programme for Plant Genetic Resources (ECPGR)** is a collaborative programme among most European countries aimed at facilitating the long-term conservation and the increased utilization of plant genetic resources in Europe. The Programme, which is entirely financed by the member countries, is overseen by a Steering Committee composed of National Coordinators nominated by the participating countries and a number of relevant international bodies. Bioversity International provides the Coordinating Secretariat. The Programme operates through nine networks in which activities are carried out through a number of permanent working groups or through ad hoc actions. The ECPGR networks deal with either groups of crops (cereals; forages; fruit; oil and protein crops; sugar, starch and fibre crops; vegetables) or general themes related to plant genetic resources (documentation and information; *in situ* and on-farm conservation; inter-regional cooperation). Members of the working groups and other scientists from participating countries carry out an agreed workplan with their own resources as inputs in kind to the Programme.

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Home garden in Caltavuturo, province of Palermo, Italy, courtesy of © Lorenzo Maggioni, Bioversity International, Maccarese, Rome, Italy.

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## SUMMARY OF THE MEETING

### Introduction

#### ***Welcome address and opening remarks***

Valeria Negri, Chair of the On-farm Conservation and Management Task Force of the On-farm and *In situ* Conservation Network of the European Cooperative Programme for Plant Genetic Resources (ECPGR), opened the third meeting of the Task Force, thanked the local organizers and acknowledged the support kindly provided by the Agricultural Institute of Slovenia and the Slovenian Research Agency. She was happy to see such a large group of people showing interest in on-farm conservation, and informed the participants that this meeting was dedicated to reviewing the Task Force's achievements during the past year.

Jože Ileršič welcomed the Group in the name of the Ministry of Agriculture, Forestry and Food.

Ms Martina Zupančič, Director of the Institute of Hop Research and Brewing of Slovenia also welcomed the meeting to Slovenia and wished them success in their collaborative work.

Vladimir Meglič welcomed the Group on behalf of the Director of the Agricultural Institute of Slovenia and expressed the hope that the meeting would help to impart more energy to conservation efforts in Europe.

Following a brief update on ECPGR presented by Lorenzo Maggioni, the participants introduced themselves and then Markus Schmidt presented DIVERSEEDS, a networking project funded by the European Commission (6th Framework Programme). This 2-year project, spanning the period 2006-2008, involves 10 partner institutions from China, South-East Asia and Europe and contributes to supporting networking activities and is also organizing the preparatory phase for submitting project proposals.

### Tasks agreed at the second meeting and progress made

#### ***The new Web pages dedicated to the On-farm Task Force***

The Web pages prepared by Bioversity International were presented by Lorenzo Maggioni. These include background information on the Task Force's activities, events and news. Space is dedicated to activities in the member countries on on-farm and in-garden conservation of landraces, to a directory of institutions involved in on-farm activities and to a bibliography of articles written by Task Force members and other experts.

The suggestion was made that actions on old cultivars should be included as well, and it was stressed that the bibliography should only refer to on-farm activities.

#### ***Documentation: minimum descriptor list for the documentation of on-farm conservation and management activities***

Dana Constantinovici presented the list of descriptors developed by the Romanian Genebank and by V. Negri (University of Perugia) and she informed the Group that these descriptors were being tested in the Apuseni Mountains in Romania. This list of descriptors has a double purpose: a) to gather information on landraces which are being collected from farmers, and b) to build up a knowledge base in order to advise policy-makers on appropriate decision-making. The descriptors are meant to describe the landrace(s) present on the farm and the

farm's management (agricultural system, cropping management and farm labour division by gender). Information is also collected on the seed supply system and the farmer's criteria for distinguishing the landraces. Selection criteria and other cultivation and seed storage management practices are also recorded, as well as sociocultural, historical and traditional aspects. The collector's conclusion estimates the level of risk of losing the specific landraces.

During the discussion, it was pointed out that collection of additional information could be useful, specifically on traditional farming systems and old varieties, on the use of the products, and on landrace population size, which would be an important element to relate on-farm data with genebank data.

### ***Decision***

*In order to further develop the descriptors and make plans for a European documentation system for on-farm data, it was agreed that a broader discussion was needed, which will also involve the ECPGR Documentation and Information Network. A small sub-group will be formed in order to decide on the process. Meanwhile, the draft descriptor list will be circulated among all Task Force members. This will make it possible to have wide consultation about the list. D. Constantinovici and V. Negri will collate the initial comments and revise the draft. The new draft will be made available to all the stakeholders on the Task Force's dedicated Web page.*

### ***Documentation: list of published literature and grey literature***

The importance of unconventional information (grey literature) and guidelines to finding these sources of information were described by Z. Stehno and B. Schierscher-Viret, who also presented the Swiss database for the conservation and sustainable use of plant genetic resources for food and agriculture, which is rich in historical and bibliographic information on Swiss traditional crops and varieties (<http://www.bdn.ch>). This online database relates what is conserved in Switzerland with literature references and it includes information on whether the material is conserved on-farm. A CD prepared by the Swiss programme in French and German also includes 5500 data points about specific varieties and links to related text in literature dating from 1700 to 1968, and also includes information on synonyms.

### ***Documentation: directory of organizations and individuals and list of available publications related to on-farm conservation in their respective countries***

V. Negri reiterated that the collection of contact details of organizations and individuals working for on-farm conservation and of related articles is a task for all delegates, who should provide this information as soon as possible to the ECPGR Secretariat for Web uploading.

It was also proposed to make the articles available in PDF format if they were not copyright-protected, or to give the hyperlink to the respective journal. Regarding the publications on landraces written in national languages, it was agreed that these should not be excluded from the list, since there are people who can read them and find them interesting.

### ***Project proposal to be carried out in close collaboration with non-governmental organizations (NGOs)***

Nigel Maxted summarized the steps leading to the preparation, on behalf of the Group, of a research concept note focusing on European Home Garden diversity conservation, including both NGO and formal sector partners. The note was circulated to Task Force members who

expressed an interest in July 2006. Task Force members responded positively and provided feedback for the next iteration.

Bioversity responded less positively, possibly due to some misunderstanding of the reasoning behind the concept. It was agreed not to proceed with an application at once, but to discuss the issue further in Slovenia and to develop project ideas with Bioversity support.

In the discussion, the meeting agreed on the need to produce a one-page document and lobby in the respective countries as well as at the European Commission level in order to influence the eligible themes for Research Framework Programme 7.

### ***Report on information regarding seed legislation***

Paul Freudenthaler summarized the status of the process leading to a new Directive providing for certain derogations for acceptance and marketing of landraces and conservation varieties. The next meeting of the Standing Committee on Seeds is planned for November 2007.

In the new Directive it is foreseen that acceptance of varieties in the Common European Catalogue would not require official examination as long as sufficient information is provided. The requirement for uniformity would also be reduced to 90% of varietal purity.

Conditions for marketing will include limits to seed production and marketing which should only be within the region of origin, and quantitative restrictions so that the quantity of marketed seed of conservation varieties does not exceed 10% of the seed of the same species used in that Member State in one year (each conservation variety cannot exceed 0.5% or a quantity to sow 100 ha, whichever is the greater quantity). Other directives regulating amateur varieties (for vegetables) and seed mixtures (for fodder plants) are in the pipeline.

In the discussion, it was pointed out that disappointment was being expressed in various sectors, both because of the lengthy procedure for the preparation of the Directive and because of its content. It was argued that the Directive might not be helpful for genetic resources conservation and that the requirements to ensure distinctness might still be very complicated and expensive. It was reported that people in France were being prosecuted for selling small packages of seed for home gardens, and that this Directive will not help to liberalize this behaviour by national authorities.

The meeting agreed that it was too late to influence the process for the approval of the Directive at the European level. However, considering that the implementation of the Directive at national level may vary a lot from country to country, it would be useful to reach a consensus position of the On-farm Task Force and consequently provide recommendations for the implementation of the Directive at the national level. The Group thought that it would be useful to analyze the legislation from the point of view of its effect on conservation of genetic resources.

### ***Decision***

*P. Freudenthaler volunteered to keep a sub-group of interested people informed about the progress of the legislation and to compile observations in order to develop a consensus statement by the On-farm Task Force. The sub-group is composed of the following people: Béla Bartha, Zofia Bulińska, Brian Ford-Lloyd, Lothar Frese, Jan Engels, Isabel Lopez, Lorenzo Maggioni, Petter Marum, Nigel Maxted, Pedro Moreira, Valeria Negri, Bob Sherman and Rudolf Vögel.*

### ***Information on methodologies developed for the conservation of traditional varieties***

In a presentation prepared together with V. Negri, Pedro Mendes Moreira explained that, although landraces may be considered generally extinct in post-modern society, in fact they continue to be maintained on-farm. In Europe, the main factors involved appear to be for the preparation of traditional dishes and products, the adaptation to low input agriculture and to polycropping systems and other traditional uses (such as for thatching and corn dollies). A number of actions can be developed to maintain the landraces on-farm:

- **Typical products**  
Some landraces can be promoted for their use in preparing typical products; this type of demand is growing in countries such as Italy and Portugal. Local authorities should then investigate the marketing perspectives and promote the cultivation of landraces. Examples were cited of landraces which have obtained the Protected Designation of Origin (PDO) in Italy ('Fagiolina del Trasimeno' and 'Farro di Monteleone di Spoleto') and in Portugal (21 different fruits and vegetables). Specific labels can only be assigned to farmers' products ('Dos Lobos' is the Portuguese brand of all the products that are produced in a specific farm). There are examples in Portugal where confraternities can also be used to promote landraces.
- **Marks of origin and quality**  
Protected Designation of Origin (PDO) recognition could lead to conservation of genetic resources, but there must also be a balance between increasing production and the risk of depleting the genetic diversity (e.g. *Agave*, *Vitis vinifera*). PDO could be very important for plant genetic resources (PGR) on-farm conservation, but in some cases certification is difficult to obtain (e.g. bread maize 'Broa de Avintes').
- **Specific laws**  
Regions in Italy have developed laws to protect on-farm maintained PGR. Regional authorities compiled inventories of landraces and provided support to farmers maintaining them on-farm. In France, efforts are being made to create a regional list of varieties in order to allow their distribution among farmers but only at regional level. The European Union (EU) rural development policy also favours moves in this direction.
- **Organizations**  
Foundations such as "Slow Food", networks of farmers such as the Portuguese "Colher para Semear" and NGOs such as the Swiss "ProSpecieRara" are actively involved in the cultivation, preservation and promotion of traditional crops.
- **Local fairs**  
In local fairs, prizes are awarded to the farmer(s) who show the best products. Enhanced local tourism also promotes the maintenance of landraces on-farm.
- **Product contests**  
Recognition of the farm community can be ensured through prize awards, such as the contest "Best Ear of Sousa Valley" which started in 1992, or "Best Bread Maize Broa", organized since 2002.
- **Organic farmers**  
Landraces are expected to have higher resistance to biotic or abiotic stress and therefore organic farms can make use of landraces and preserve them.
- **Participatory plant breeding**  
In the example of the Sousa Valley Project (VASO), initiated by Silas Pêgo in 1984, the project studied the evolution of maize breeding and genetic resources in Portugal under on-farm conservation and participatory plant breeding. Landraces of maize still exist in Portugal and mass selection is generally done in the store after harvest

(e.g. selection for big ears); more rarely farmers select both in store and in the field (e.g. selection for earliness).

- **Amateurs**

This category of farmers is also interested in the cultivation of garden crop landraces or in “fostering” their cultivation.

- **Other strategies**

It is possible to link on-farm conservation with environmental protection (in general).

On-farm conservation of some crops, such as forage landraces and melliferous plants contribute in Portugal to 15 PDO meat products, 14 PDO for cheese and 8 PDO for honey.

NGOs (e.g. “Associação Integrar”, “Quinta da Conraria”) which deal with problems of poverty eradication, social exclusion and helping disabled people, use agriculture, generally organic farming, as a therapeutic and working component. Their interest for organic farming could be extended to the use of landraces.

Among the research needs to further develop on-farm conservation, there is a need to understand the on-farm conservation context (bioclimatic and socio-economic); it is also important to compile inventories to define methodologies for the conservation of traditional varieties and traditional polycropping systems.

In conclusion, landraces (LRs) can be protected and used (sometimes with economic advantage for the farmers).

Investigations carried out in Italy, Portugal, Spain and UK showed that LRs were mostly retained for narrow utilization, for domestic use in the preparation of traditional dishes/products, or for adaptation to harsh edaphic or climatic conditions. Each of these narrow production niches is severely threatened by change and destruction of their agricultural and social context.

A reinforcement of links between the rural communities, their plant genetic resources and pride in their living heirlooms is needed to convince the younger generations to continue growing landraces; it must be realized that farmers are not consumers of subsidies, in fact society should pay them fair prices for their complex work (e.g. genetic resources conservation, environmental sustainability, landscape conservation and forest protection).

In the discussion, different views were expressed regarding the opportunity of introducing subsidies to promote the use of landraces. Subsidies were said to be unsustainable, since they depend on the changing political will. They were also considered a possible useful trigger for initial investment, but in the long term the cultivation choices need to be self-sustainable.

Regarding landrace conservation and the organic movement, it was observed that the link was not necessarily very strong, since modern varieties can also be grown as organic crops.

## **Public awareness**

### ***Status of the publications on case studies: a round table exchange of information***

Lothar Frese presented the draft case study on “On-farm management of fodder beets in Germany”. He said that the fact sheet needed to be prepared with some structure, with an introduction describing the subject and why fodder beet is grown, and the history of the material that existed in the 1950s. A landrace description of what is left on-farm is also included, as well as on-farm conservation examples at Quedlinburg. The competition between corn and fodder beet is described. A section deals with the way farmers are

maintaining the traditional cultivation practices. The case study should not only talk about landrace conservation and it needs to include good pictures.

M. Veteläinen mentioned examples of forages and cereals from the Nordic Countries. A case study on timothy (*Phleum pratense*) was under way and one on cereals will be prepared with reference to a wheat landrace of the Baltic Sea area.

B. Bartha mentioned that there is no traditional system for growing landraces in Switzerland, while modern production systems are fully developed.

The preparation of several case studies showing the situation in different countries would be welcome. B. Bartha and Ayfer Tan were considering preparing case studies from Switzerland and Turkey respectively.

### ***European landrace conservation paper(s) in Bioversity Technical Bulletin***

N. Maxted reminded the Group of the suggestion made in 2004 to prepare a *Bioversity Technical Bulletin* containing Landrace Conservation Case Studies. Considering that several Bioversity publications in this area were derived from the Global On-farm Project, other topics for the Network's use of funds could be explored, such as methodologies to create national inventories, as well as including conservation case studies.

L. Frese commented that case studies displayed on the Web make sense only if we also prepare a general strategy (i.e. the book described above).

N. Maxted made it clear that the online four-page case studies are primarily for public awareness. Other case studies could go into more detail and would be not for general readers but for specialists, analyzing how the genetic diversity is maintained. An additional layer should be added to look into the future, considering how we can combine various solutions to promote these landraces and to allow them to continue their evolution.

Three options were proposed, i.e. to prepare: 1) a *Technical Bulletin* entirely dedicated to long-term landrace studies; 2) a landrace methodological approach (plus some long case studies) to on-farm conservation and a study on methodologies to create national inventories; 3) only methodologies to create national inventories.

### ***Decision***

*Option 2 was accepted, i.e. to prepare a Technical Bulletin including both landrace case studies (at specialist level) and a study on methodologies to create national inventories.*

*Short case studies should also be produced, with the objective of raising public awareness. These will be uploaded on the dedicated Web pages.*

## **Information on the project AEGRO**

L. Frese gave an introduction on the Federal Centre for Breeding Research in Cultivated Plants (BAZ).<sup>1</sup> Research priorities of BAZ are resistance to biotic stress and tolerance to abiotic stress, improvement of product quality, breeding research and breeding of fruit as well as grapevine varieties. It also has the objective of promoting biodiversity in agricultural ecosystems and developing strategies for sustainable management and use of plant genetic resources. The AEGRO project (full title: "An Integrated European *In Situ* Management

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<sup>1</sup> BAZ was merged on 1 January 2008 with the other federal research centres of the German Federal Ministry of Food, Agriculture and Consumer Protection (BMELV) to form the Federal Research Centre for Cultivated Plants – Julius Kühn-Institut.

Work Plan: Implementing Genetic Reserves and On-Farm Concepts”), of which BAZ is coordinator, was prepared based on the awareness that the concept of “genetic reserve” has not been widely tested and implemented. It was considered the responsibility of plant breeders and the agricultural sector as such to initiate the protection of those genetic resources *in situ* required for future breeding. The agricultural sector cannot assume that Ministries of Environment in Europe can manage genetic resources for the food and agricultural sector without a clear expression of interest in particular species and populations by the agricultural sector. At the level of implementation of genetic reserves, the responsibilities and competences of the Ministries of Agriculture and of the Environment need to be complementary and therefore there is a high requirement for data exchange, coordination and joint planning. The project was funded by the EU for three years, starting in October 2007, with a budget of € 829 625. The project involves eight partners from Denmark, Germany, Greece, Italy, Portugal, Spain and UK. It has the following objectives:

1. Develop crop-specific *in situ* management workplans based on the genetic reserve concept.
2. Identify sites suited for organizing genetic reserves.
3. Analyze crop case studies to reveal constraints impairing the application of the genetic reserve concept.
4. By geographical information system (GIS) analysis of genetic reserve sites, discover the Most Appropriate Areas where a high amount of diversity can be maintained at good cost-value ratio.
5. Establish generic quality standards for a European genetic reserve network.
6. Develop the European Central Crop Databases towards becoming central coordination instruments for *in situ* management. The collaboration between institutions requires (i) within-crop specific information systems and (ii) an information system for all crop wild relatives.
7. Use results arising from 1-6 to improve the generic concepts and methodologies launched by the completed PGR Forum Project and to establish a Web-based helpdesk function for the development of national crop wild relatives and landraces’ *in situ* management strategies.

AEGRO was initiated by the ECPGR *In situ* and On-farm Conservation Network in March 2006, when the need for *in situ* management was expressed by most of the ECPGR crop-specific Working Groups. Involvement of the ECPGR Working Groups and the ECPGR Task Force on On-Farm Management in the AEGRO process is an essential requirement. Without the support of the ECPGR Working Groups, AEGRO will remain a project and will not develop towards a European Programme/Network for genetic reserves. In particular, Work Package 03 (Case study landraces) will profit from a stronger involvement of NGOs. AEGRO and the follow-up process rely on the ability of national institutions to cooperate.

Z. Bulińska commented that the genetic reserve concept is not really suitable for maintaining landraces.

## Country reports

The contributions received from all participants will be uploaded on the Web page of the On-farm Conservation and Management Working Group<sup>2</sup> ([http://www.ecpgr.cgiar.org/Networks/Insitu\\_onfarm/OnfarmTF\\_intro.htm](http://www.ecpgr.cgiar.org/Networks/Insitu_onfarm/OnfarmTF_intro.htm)).

## Reviewing national experiences (summary of posters' information)

### *North and Northwest Europe*

M. Veteläinen summarized information received from Denmark, Finland, the Netherlands, Norway, Sweden and the United Kingdom. A National Inventory of on-farm conservation activities is only available in the UK and a partial inventory was made in Finland, as part of the reports of the On-farm Conservation Project financed by the Ministry of Agriculture and Forestry and the Landrace Seed Producer Register. In Sweden, as a result of "The Seed Call" initiative, a complete list of private persons maintaining landraces and historical cultivars is available. Several ethnobotanical projects documenting cultivation traditions are also taking place. Some cereal landraces are cultivated under organic production.

Additional information on on-farm conservation was obtained from Denmark (one case study), Finland (landraces, mostly on cereals, are still grown in small scale), United Kingdom (cereal landraces are grown in the Northern Isles and Outer Hebrides and in southern England), the Netherlands (in-garden conservation is ongoing; activities are supported by the Centre for Genetic Resources (CGN) and a platform is under development), Norway (some landraces are in active use; *de novo* landraces are created for forage species; *in situ* conservation of old meadows; old cultivars of cereals and vegetables are managed by conservation associations) and Sweden (seeds of vegetables and other garden plants are maintained by private persons).

Formal state support to on-farm conservation/maintenance has been recorded in Finland (there is a register of varieties, but it is not too popular among farmers) and United Kingdom (support schemes for traditional farming exist). In Norway and the Netherlands, support was provided on a project basis.

Regarding the role of NGOs, a "Landrace Association" in Finland is maintaining mostly ornamentals and a few crops. Seeds are available for sale. Numerous NGOs in the UK are associated with landrace conservation. In-garden conservation is carried out in the Netherlands predominantly by NGOs and not by individual farmers (10-20 initiatives). NGOs are the main actors in the projects in Norway.

The total number of landraces on national lists of varieties in the various countries is as follows: Denmark (1), Finland (19), Norway (7), Sweden (2) and United Kingdom (5).

The main obstacles found to landrace conservation through this survey were the following:

- Ignorance of the need for landrace conservation by the general public but also by professional conservationists;
- Lack of a comprehensive landrace inventory;
- No development of niche marketing for landraces;
- Lack of systematic *ex situ* duplication of known landrace material;
- Lack of funding for landrace conservation;

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<sup>2</sup> During the Eleventh Meeting of the ECPGR Steering Committee (Bosnia and Herzegovina, September 2008) it was recognized that the existing On-farm Conservation and Management Task Force has long-term plans of action and therefore deserved the status of "Working Group". The Task Force was therefore converted into Working Group.

- Ageing of the farmers and seed maintainers;
- Lack of seed availability;
- Lack of economic support;
- With in-garden activities, the major problem is that continuity in most cases is not guaranteed, as the work is mainly carried out by volunteers.

In the discussion, M. Veteläinen clarified that the maintainers of landraces included in the national lists are private persons or small private companies and that vegetables in the national lists are mainly brassicas.

### ***Central Europe***

J. Drobná summarized information received from Belgium, Czech Republic, Germany, Hungary, Slovakia and Switzerland.

Many landraces were lost in this area with the development of modern agriculture and land collectivization (in former socialist countries) or with the introduction of new high-yielding varieties and of seed regulations. In many cases landraces were collected and conserved in genebanks, while the conservation of landraces on-farm is very sporadic due to the use of modern forms of agriculture, the age of traditional farmers, the decreasing number of people working in agriculture, with insufficiently motivated younger generations, weak landrace seed supply, and the seed regulations.

The main interest currently for the use of neglected, non-commercial, non-high-yielding crop plants and varieties is connected with the development of organic production, including efforts for organic plant breeding, NGO activities, nature protection measures and consumers' preferences.

Private organizations, NGOs and individuals are aiming at conserving and improving the diversity of landraces, mostly without well established coordination, national inventories or financial support.

Conservation of landraces is sometimes taking place in agricultural history and open-air museums, in nature reserves, in private and public gardens and orchards and on organic farms.

The main reasons for conservation of landraces are their adaptability to local conditions, better quality, and preferences for traditional food.

Specific activities and contact details of active people and institutions in the respective countries were also presented.

In the discussion, J. Drobná clarified that landraces existing in Central Europe are mainly fruit and in some cases cereals and vegetables.

N. Maxted commented on the need to estimate how many landraces were lost over a defined time period. This is a research project that is still waiting to happen, since policy-makers want to see figures. It will be important to carry out this exercise even if it will have to be done on the basis of literature and of the memories of farmers.

### ***South-Central Europe***

D. Constantinovici summarized information received from Austria, Italy, Portugal, Romania, Slovenia and Spain.

The presence of landraces was reported from most of the countries, including cereals, vegetables, legumes, garden crops, fruit and other crops such as beet, flax, potato and sunflower. All types of institutions are involved in conservation activities (farmers' associations, research institutes, local administrations, genebanks, NGOs and individual farmers).

The following reasons to maintain landraces were reported: new varieties are not always well adapted to poor soils and to climate stress; old local varieties are regarded as having better gastronomic qualities than modern types; to maintain traditions; high prices of certified seeds and farmers' limited financial resources; limited access to the seed markets; and lack of information on improved varieties.

The following activities were recorded in this area: inventory and interviews at household level using the "On-farm descriptor list"; pilot projects to maintain diversity on-farm; public awareness; promotion of laws to protect local germplasm; financial support for farmers using traditional landraces and agricultural practices; evaluation, characterization and conservation of native crop germplasm; and national coordination of activities to promote on-farm conservation. These activities resulted in the following type of achievements: lists and catalogues of traditional varieties; adoption of laws to protect local germplasm; ensuring financial support to conservationist farmers; support of local communities by including certain farmers into national agrotourism networks; registration and promotion of "trademarks" for local products; market development and sustainable utilization of landraces; and creation of genepools with known traits as a basis for better crop development.

In the discussion, N. Maxted asked the opinion of the Group about the existence of hotspots of landraces, such as can be found in Romania, United Kingdom and perhaps other places. V. Negri confirmed that hotspots could be found in Italy in difficult pedoclimatic conditions, such as mountain areas, but they can also be found in fertile areas, since modern agriculture is sometimes carried out with landraces (pepper 'Peperone d'Asti', artichoke 'Romanesco', tomato 'S. Marzano'). P. Marum and Z. Bulińska confirmed that landraces can be found in mountain areas in Norway and Poland respectively. R. Vögel stated that modern agriculture has replaced all the field crop landraces in Germany, but that fruit trees survive as relicts in Eastern Germany. L. Frese thought that landraces can be found in isolated spots (home gardens) and not necessarily in any specific geographical region.

### ***South-Eastern Europe***

A. Tan summarized information received from Azerbaijan, Bulgaria and Turkey.

Turkey is conserving in the national genebank about 20 000 collected landraces and also 7000 local fruit types, which are maintained in 16 field genebanks. During the On-farm Project activities carried out by Turkey in collaboration with Bioversity, questionnaires were compiled by farmers, and a national management plan was prepared. Subsidies were not considered an option, and the focus was on marketing and public awareness. Small projects are led by NGOs (marketing and organic farming and seed exchange mechanisms).

## **Network task perception (results of a questionnaire)**

N. Maxted reported the results of the replies received to the questionnaire that he distributed to the Network members. The general result shows that there is very little knowledge about landraces and that institutional conservation activities are still in the early stages. He concluded with a list of the future requirements of the Group:

- *In situ* strategic approach for "A European Genebank Integrated System" (AEGIS)
- *In situ* strategic approach for the European Internet Search Catalogue (EURISCO), as part of the project EPGRIS 3
- *In situ* data structure and data collection via the ECPGR Documentation Network and the *In situ* National Inventories

- Involvement of the ECPGR *In situ* and On-farm Conservation Network in the European Strategy for Plant Conservation
- Definition of Important Plant Areas (IPAs) for crop wild relatives and landraces.

L. Maggioni made it clear that PGR National Inventory *In situ*/On-farm Focal Points were nominated by the respective National Coordinators, following an invitation made by the ECPGR Secretariat in January 2007. They are expected to hold responsibility within their countries for the creation and/or development and/or coordination at national level of *in situ*/on-farm PGR inventories. They will be expected to ensure the appropriate flow of data to a European catalogue, when this will be available. Their role is eminently technical, but they are also expected to give clearance for the online publication of country passport data.

J. Engels clarified that we should continue to develop the necessary technicalities for the establishment of "European populations" which could be part of AEGIS. However, concerns were expressed by ECPGR Steering Committee members that the development of an *in situ* component of AEGIS was premature. He suggested that this discussion should be linked to the ongoing discussion of *in situ* conservation that is held at the level of the International Treaty Governing Body.

## **Redefinition of tasks, responsibilities and time frame – plans for Phase VIII of ECPGR**

V. Negri listed the achievements reached by the On-farm Conservation and Management Task Force, as follows:

- Establishment of a dedicated Web site
- Draft of the on-farm descriptors
- Provision of information to the Group on legislative matters
- Provision of information to the Group on methodologies developed for the conservation of traditional varieties
- Reports on relevant on-farm activities in each country.

Partial achievements included the preparation of a partial list of contacts of organizations involved in on-farm activities, the production of a few case studies on on-farm conservation of different crops and the preparation of a publication on "European landrace conservation", which is in progress.

Among the things to be completed within the current Phase, she listed the following:

- Descriptors to be circulated immediately with comments to be received within one month before making them available on the Web.
- Case studies: more studies will be included on the Web. Volunteers to complete case studies were Ayfer Tan, Juan José Ruiz Martínez and Pedro Moreira. Other case studies would also be welcome.
- Completing national reports (i.e. transfer into text the content of each poster) and send them as soon as possible to the ECPGR Secretariat.

The opportunity to complete the following other tasks was raised for discussion:

- Public awareness
- Inventories
- Study on farmers' motivation for maintaining landraces.

A discussion took place on the opportunity to create inventories of what is conserved on-farm. The usefulness of such inventories was questioned on the basis of the consideration that inventories are only able to describe the situation at a specific point in time, while on-farm material is in an ever-changing dynamic situation. It was acknowledged that an inventory may need to be much more dynamic for landraces, but this should not be a reason not to make one. A starting point is necessary, in order to have reference points for management decisions and to act as a baseline to follow changes over time. Inventories were proposed as necessary tools to make gap analysis, which should be done in coordination with the Crop Working Groups. The AEGRO project was suggested as the most appropriate forum for the preparation of inventories and collaboration among Networks to take place.

The opportunity to better study the motivations for maintaining landraces was discussed, on the basis of the assumption that understanding motivations will help to define strategies and promote the maintenance of landraces. Although examples exist, there is no clear and complete picture of the European situation. For example, not only farmers, but also other categories of people are interested in maintaining landraces. Work carried out globally by Bioversity International may not always apply to the specific motivations existing at the European level. M. Veteläinen confirmed that information about motivation was gathered in Finland and used to support conservation, but she questioned whether it was important to collect this information at the European level.

Overall, the Group was in favour of establishing a small sub-group to define the motivation for people to conserve landraces: the sub-group should approach farmer organizations and NGOs for this purpose.

The Group also discussed the opportunity to study the genetics of on-farm crop populations, in order to have information on how they change in time and get useful indications for managing the existing diversity. It was acknowledged that the Group as such did not have the means at the moment to start such complex studies at the European level.

### **Decision**

*The Group discussed this aspect and agreed to invite to the next meetings one representative each of the following categories: plant breeders, farmers' organizations, organic and NGO movements. They would become formally recognized associate members of the Group, although no funds would be made available by ECPGR to cover their expenses.*

*It was also decided that each Task Force member will work within her/his own context for increasing public awareness of on-farm conservation issues.*

D. Silveri directed the attention of the Group to a couple of meetings planned in 2008, where members of the Task Force are encouraged to be present and to establish contacts with farmers and organic movement people:

- International Federation of Organic Agriculture Movements (IFOAM): "16th IFOAM Organic World Congress", 18-20 June 2008, Modena, Italy
- "Terra Madre 2008": third edition of the biennial international meeting of the Terra Madre Network, 23-27 October 2008, Turin, Italy.

The Group reconfirmed Valeria Negri as its Chair and she kindly accepted. The Group warmly thanked Nataša Ferant, Vladimir Meglič and their colleagues for the excellent organization of the meeting and their kind hospitality.

## **APPENDICES**

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## Appendix I. List of posters

1. **The current state and prospects of on-farm conservation of PGR in Azerbaijan**  
Z. Akparov, A. Mammadov and A. Valiyev  
Institute of Genetic Resources, Azerbaijan National Academy of Sciences, Baku, Azerbaijan  
(akparov@yahoo.com; afiqmuellim@rambler.ru; ali\_valiyev\_gri@yahoo.com)
2. **Fruit tree biodiversity**  
I. Villette and M. Lateur  
CRA-W (Belgium), Walloon Agricultural Research Centre, Department of Biocontrol & Plant Genetic Resources, Gembloux, Belgium (dptbio@cra.wallonie.be)
3. **On-farm conservation in Finland: social and cultural value, diversity and utilization of Finnish landraces**  
M. Heinonen and M. Veteläinen  
MTT Agrifood Research Finland (maarit.heinonen@mtt.fi; Merja.vetelainen@mtt.fi)
4. **What can a landrace case study tell us about adaptation traits**  
B. Tiranti and V. Negri  
Dipartimento di Biologia Vegetale e Biotecnologie Agroambientali e Zootecniche. Università di Perugia, Perugia, Italy (vnegri@unipg.it)
5. **Development of a report and monitoring system for the *in situ* conservation of plant genetic resources (PGR) in Brandenburg (Germany)**  
P.L. Ibish<sup>1</sup>, R. Kätzel<sup>2</sup>, A. Reichling<sup>3</sup>, I. Schwand<sup>1</sup> and R. Vögel<sup>3</sup>  
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<sup>3</sup> Brandenburg State Office for Environment (LUA) (rudi.voegel@lua.brandenburg.de; andreas.reichling@lua.brandenburg.de)
6. **Conservation of crop genetic resources by utilization: A pilot project with old *Lactuca* varieties**  
R. Vögel<sup>1</sup>, C. Lehmann<sup>2</sup>, G. Lissek-Wolf<sup>2</sup> and S. Huyskens-Keil<sup>2</sup>  
<sup>1</sup> VERN e.V. (Verein zur Erhaltung und Rekultivierung von Nutzpflanzen in Brandenburg)  
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(Contact: gunilla.lissek-wolf@agr.ar.hu-berlin.de)
7. **Gardening Culture and Crop Species Composition in Dévaványa Esa**  
Á. Gyovai and G. Málnási Csizmadia  
Institute of Agrobotany, Tápíószele, Hungary
8. **On-farm conservation activities. A report for Italy**  
V. Negri, S. Lorenzetti and M. Falcinelli  
Dipartimento di Biologia Vegetale e Biotecnologie Agroambientali e Zootecniche. Università di Perugia, Perugia, Italy (vnegri@unipg.it)
9. **On-farm conservation of agricultural crops, vegetables and horticultural plants in Poland**  
Z. Bulińska-Radomska<sup>1</sup>, M. Zaczyński<sup>1</sup>, Teresa Kotlińska<sup>2</sup> and Jaroslav Pajakovský<sup>3</sup>  
<sup>1</sup> Plant Breeding and Acclimatization Institute, Radzików, Poland  
<sup>2</sup> Research Institute of Vegetable Crops, Skierniewice, Poland  
<sup>3</sup> Friends of Visztula River Society, Świecie, Poland

**10. Current status of on-farm conservation in Romania**

S. Străjeru, D. Costantinovici and M. Ibănescu  
Suceava Genebank, Romania

**11. On-farm conservation / improvement activities in Norway**

P. Marum<sup>1</sup> and Å. Asdal<sup>2</sup>

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**12. Some examples of “on-farm” conservation activities in Spain**

J.J. Ruiz

Department of Applied Biology, EPSO, Universidad Miguel Hernández, Orihuela, Spain

**13. Collection and conservation of old cultivars and landraces in Slovakia**

Jarmila Drobná

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**14. Home gardens and crofts in on-farm conservation of agro-biodiversity in Slovakia**

René Hauptvogel

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**15. Old Swedish perennials and bulbs**

L. Oskarsson and K. Persson

Programme for Diversity of Cultivated Plants, Swedish Biodiversity Centre, Alnarp, Sweden

**16. Old Swedish daffodils**

K. Persson

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**17. POM – Sweden’s national PGR programme**

E. Jansson and J. Weibull

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**18. Diverseeds. Networking on conservation and use of plant genetic resources in Europe and Asia**

M. Schmidt<sup>1</sup>, K. Hammer<sup>2</sup>, P. Banterng<sup>3</sup>, J. Engels<sup>4</sup>, B. Ford-Lloyd<sup>5</sup>, G. Giersch<sup>1</sup>, R. Gretzmacher<sup>6</sup>, R. Hadas<sup>7</sup>, V. Hager<sup>6</sup>, Z. Hai-Fei<sup>8</sup>, S. Kell<sup>5</sup>, K. Khoshbakht<sup>2</sup>, Q. Lijuan<sup>9</sup>, N. Maxted<sup>5</sup>, A. Naing Oo<sup>3,10</sup>, T.L. Nguyen<sup>11</sup>, A. Polthanee<sup>3</sup>, W. Wei<sup>8</sup> and Z Zengyan<sup>9</sup>

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## Appendix II. Agenda

### **Third Meeting of the ECPGR Task Force on On-farm Conservation and Management**

**2-3 October 2007, Ljubljana, Slovenia**

#### **Tuesday 2 October 2007**

##### **Morning session (Chair: N. Maxted)**

- 08.30-08.45 **Welcome address** (*N. Ferant and V. Negri*)
- 08.45-09.00 **ECPGR update** (*L. Maggioni*)
- 09.00-09.10 **Brief self-introduction of all the participants**
- 09.10-09.20 **Introducing DIVERSEEDS Members to the Task Force** (*M. Schmidt*)
- 09.20-10.15 **Tasks agreed at the second meeting and progress made**
- Presentation of the Task Force Web site (*L. Maggioni, 10'*)
  - Documentation: minimum descriptors list for the documentation of on-farm conservation and management activities (*D. Rosu / S. Strājeru, 15'*)
  - Documentation: list of published literature + grey literature (*Z. Stehno / B Schierscher-Viret, 15'*)
  - Documentation: directory of organizations and individuals and list of available publications related to on-farm conservation in their respective countries (*V. Negri, 15'*)
- 10.15-10.45 *Coffee break and poster viewing*
- 10.45-11.30 **Tasks agreed at the second meeting and progress made** (*continued*)
- Project proposal to be carried out in close collaboration with NGOs (*N. Maxted, 10'*)
  - Report of information regarding seed legislation (*P. Freudenthaler, 20'*)
  - Information on methodologies developed for the conservation of traditional varieties (*P. Mendes Moreira, 15'*)
- 11.30-12.30 **Discussion**
- 12.30-14.30 *Lunch and poster viewing*

##### **Afternoon session (Chair: V. Negri)**

- Tasks agreed at the second meeting and progress made** (*continued*)
- 14.30-15.00 **Public awareness**
- Status of the publications on case studies: a round table exchange of information (*N. Ferant / L. Frese / B. Bartha / V. Negri / M. Veteläinen, 15'*)
  - European landrace conservation paper(s) in Bioersity Technical Bulletin (*N. Maxted, 15'*)
- 15.00-15.15 **Information on the project AEGRO** (*L. Frese, 15'*)
- 15.15-16.00 **Discussion**
- 16.00 onwards *Coffee break, poster viewing and free afternoon*

## **Wednesday 3 October 2007**

### **Morning session (Chair: L. Holly)**

- Tasks agreed at the second meeting and progress made** (*continued*)
- 8.30-9.30 **Reviewing National experiences (summary of posters' information)**
- North and Northwest Europe, a review (*M. Veteläinen, 15'*)  
(Denmark, Finland, the Netherlands, Norway, Sweden, UK)
  - Central Europe, a review (*J. Drobná, 15'*)  
(Belgium, Czech Republic, Germany, Hungary, Slovakia, Switzerland)
  - South-Central Europe, a review (*D. Constantinovici, 15'*) (Austria, Italy, Portugal, Romania, Slovenia, Spain)
  - South-Eastern Europe, a review (*A. Tan, 15'*)  
(Azerbaijan, Bulgaria, Turkey)
- 9.30-10.00 **Discussion**
- 10.00-10.30 *Coffee break*
- 10.30-10.45 **Network task perception (results of a questionnaire)** (*N. Maxted*)
- 10.45-11.15 **Development of new projects: a round table consultation** (*All*)
- 11.15-12.45 **Redefine tasks, responsibilities and time frame – plans for Phase VIII of ECPGR – on-farm session conclusion** (*All*)
- 12.45-14.30 *Lunch*

## Appendix III. List of participants

### **Third Meeting of the ECPGR Task Force on On-farm Conservation and Management**

**2-3 October 2007, Ljubljana, Slovenia**

*N.B. Contact details updated at time of publication. The composition of the Working Groups is subject to changes and the latest update for the On-farm Conservation and Management Working Group can be found on the Web (<http://www.bioversityinternational.org/networks/ecpgr/contacts/onfarmtf.asp>).*

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