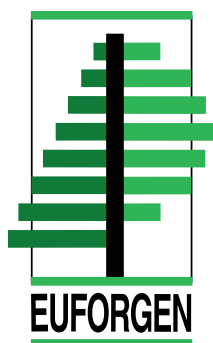




# ***Quercus suber* Network**

## **Summary of the first meeting**

Rome, Italy, 1-3 December 1994



European Forest Genetic Resources Programme (EUFORGEN)

## First Network Meeting

### Introduction

The first meeting of the *Quercus suber* Network was held at IPGRI's Headquarters in Rome, Italy from 1 to 3 December 1994. It was attended by ten participants and observers from six countries.

Participants were welcomed to IPGRI by Mr D. van Sloten on behalf of the Director General, Dr G. Hawtin, who was unfortunately not present in Rome. Mr van Sloten stressed the importance of international collaboration in the area of plant genetic resources and explained the involvement of IPGRI in forest genetic resources. He introduced Dr A. Ouédraogo, who joined IPGRI as forest genetic resources specialist at the beginning of 1993. He wished the meeting a success and apologized for not being able to attend the meeting.

Participants were also welcomed on behalf of FAO by Dr O. Souvannavong who explained the close collaboration of FAO and IPGRI in the development of the European Forest Genetic Resources Programme (EUFORGEN). He also expressed his wish to see this meeting initiate a successful collaboration among the four European countries in which *Q. suber* is indigenous. He apologized for not being able to attend the entire meeting, because of earlier commitments.

Dr E. Frison gave an introduction to the European Forest Genetic Resources Programme and explained the involvement of IPGRI in the European Cooperative Programme for Crop Genetic Resources Networks (ECP/GR) which served as a model for the development of EUFORGEN. Dr Frison stressed the fact that the success of the species networks depended to a large extent on the enthusiasm and dedication of the participants. He also announced that Mr Jozef Turok had been selected as coordinator for EUFORGEN and would start working at IPGRI in January 1995. This is expected to considerably strengthen the Programme.

Dr M. Malagnoux introduced the activities of *Silva Mediterranea* to the meeting and highlighted the possible collaboration between this FAO programme and the *Q. suber* Network. He stressed the importance of establishing a close collaboration with North African countries where *Q. suber* is also important.

The origin and the past activities of the *Q. suber* Network were presented by Dr M.C. Varela. She reported among other things on the preparatory meeting which was held in Lisbon, Portugal in July 1993.

Dr M.C. Varela was unanimously elected as chairperson of the *Q. suber* Network.

## Report

### Country presentations

In order to give an overview of the situation in the different countries, each participant made a presentation of the activities taking place in the respective countries. The presentations are included in this report.

### Objectives

Following these presentations, the group discussed the objectives of the Network. It was agreed to formulate an overall goal, a medium-term objective and a number of immediate objectives.

**The overall goal** of the Network is:

The sustainable management and conservation of *Q. suber* genetic resources.

**The medium-term objective** of the Network is:

The development of concrete strategies and methodologies for the management and conservation of *Q. suber* genetic resources and recommendations for their implementation by member countries.

To achieve this objective, the Network will work closely together to jointly identify priorities and develop and implement workplans. The Network will also foster collaboration between institutions within Europe as well as with countries in North Africa.

**The immediate objectives** of the Network are:

To compile and distribute relevant literature and information;

To make an inventory of *Q. suber* genetic resources;

To identify research needs and to develop the knowledge base required to develop sound conservation strategies;

To develop methodologies and strategies for the conservation and sustainable management of *Q. suber* genetic resources;

To raise the awareness of decision-makers of the threats to *Q. suber* diversity.

### Workplan

The meeting discussed each immediate objective and agreed on a workplan to achieve the objective.

#### **Objective 1 To compile and distribute relevant literature and information**

The Network was informed that Prof. Sardinha, Forest Research Institute, Portugal, is developing a bibliography on *Q. suber* within the framework of *Silva Mediterranea*. **It was agreed that** all participants will send references to Ms Varela by end of February 1995, and regularly thereafter. Ms Varela will link with Prof. Sardinha on this task.

**It was recommended that** the compilation of references relevant to *Q. suber* genetic resources activities be published as an attachment to the report of the third meeting of

the Network. A draft compilation will be sent to all Network members by 1 August 1995; they will return comments by 1 October for incorporation before the next meeting of the Network.

**Objective 2** To make an inventory of *Q. suber* genetic resources

**Descriptor list**

The first priority in this area is the development of a common language for the inventories. **It was agreed that** Prof. Schirone would take the lead for the development of descriptors for *Q. suber* stands and for individual trees.

Network members will send examples of descriptors already used in inventories in their respective countries to Prof. Schirone by 31 January 1995. Prof. Muhs will send a copy of the descriptors for forest stands used in Germany by the same date. For individual tree descriptors, IPGRI descriptors for other tree species will be used as a starting point. Network members should send all other relevant information to Prof. Schirone by end of January 1995.

Prof. Schirone will send a first draft to Network members by 31 March 1995. Comments and suggestions should be returned to Prof. Schirone by 31 May 1995.

**Survey of distribution of *Q. suber***

**The Network recommended that** a more precise survey of the distribution of *Q. suber* be compiled. This information is available for Portugal, Spain and France, and partially for Italy (Sardinia and Apulia).

Prof. Schirone will contact the relevant forest services in Italy before 31 December 1994 requesting that this task be performed as a matter of priority.

**It was recommended that** Prof. Schirone assemble the results of inventories from all countries in order to produce an updated map of distribution for the species.

**Detailed inventory of endangered and marginal population of *Q. suber***

Detailed inventory data of endangered and marginal population are partially available from Portugal, Spain and Italy, but not from France.

**It is recommended that** a more detailed inventory be carried out in the respective countries in order to cover all endangered and marginal populations. In France, **it is recommended that** *Q. suber* be added to the list of priority species.

**European database for *Q. suber***

**It was recommended that** a European database be established assembling data on the results of inventories and on *ex situ* collections (including provenance and progeny trials and clonal banks).

Ms Varela agreed to initiate the establishment of a database after the descriptor lists are developed.

A project proposal will be developed by Ms Varela for submission to the EC Programme on genetic resources by early 1996.

**Objective 3** To identify research needs and to develop the knowledge base required to develop sound conservation strategies

**Study of the structure of genetic diversity within and between populations**

The study of genetic structures within and between *Q. suber* populations will require the development of genetic markers as tools and the testing of adaptive traits.

**Genetic markers**

It will be necessary to compare the different markers available from a cost/efficiency point of view. Links with projects working on other oak species will be established by Dr Lumaret and Prof. Schirone to exchange information and possibly material.

**Testing for adaptive traits**

This will be carried out by provenance trials and progeny trials. The production of plants for the trials should be carried out in such a way as to maximize their uniformity. The provenance trials should provide reliable data from adaptive traits such as survival, growth, phenology and from other important traits such as form, cork quality and genotype-environment interactions. The development of early tests for important traits should be undertaken to speed up the evaluation. Early testing for cork quality would be a major breakthrough.

**Study of the inheritance of economically important traits**

This is a major objective which has to be addressed by progeny trials.

**Study on the reproductive system**

The study of reproductive system will be important to understand the genetic organization within the cork oak, its mating behaviour and the fundamental evolutionary processes in the species. Geneflow mechanisms need to be studied to determine the minimum variation required in a population for effective conservation and avoiding genetic drift.

**Study of the causes of threats on the diversity within *Q. suber***

A first step in the study of the causes of threats on the diversity in *Q. suber* will be to assemble information on what are the major perceived causes of genetic erosion in each country.

A short report will be sent by each Network member to Dr Gil by 30 April 1995 for compilation. A draft summary will be circulated by Dr Gil by 30 June 1995 for comments and finalized by 30 September 1995.

**Study of cryopreservation techniques for *Q. suber***

The Network recognized that cryopreservation could provide complementary conservation methods for safety duplication of particularly threatened populations. It is recommended that progress obtained in this area with other species be monitored in order to review the feasibility of applying this technique for *Q. suber*.

In order to address the research needs identified by the Network, a number of project proposals will be prepared for submission to different EC Programmes.

A proposal for concerted action will be developed by Ms Varela in collaboration with Prof. Muhs to put in place *Q. suber* evaluation trials using a selected set of provenances, on different sites in all member countries. The proposal will be submitted by 31 March 1995. The project will include collecting of seed from the different provenances, storing the seed, raising the plants, shipping of the plants to the different sites and establishment of evaluation plots. It will also include the initiation of a database to assemble the data on the provenances and the trial sites.

A comprehensive research proposal will be developed by Prof. Schirone covering research on the structure of genetic diversity, the inheritance of economically important traits and the reproductive system of *Q. suber*. This will involve partners in the four member countries, Germany and Sweden. The proposal will be submitted by the deadline of the call for proposals, 31 March 1995.

**Objective 4      The development of conservation methodologies and strategies**

The Network agreed that immediate action to conserve endangered populations in Italy and Spain should be taken.

In Italy, seed will be collected from endangered populations in Apulia by Prof. Schirone who will carry out studies on genetic diversity found in these populations using molecular markers. Data obtained from this characterization will be used to submit

proposals for *in situ* conservation measures to the relevant authorities.

In Spain, Dr Gil will collect twigs from the several relict populations in Central Spain during January/February 1995 and send them to Dr Lumaret for biochemical and molecular analysis. The results of these studies will be circulated to all Network members by end of June 1995 for comments. If appropriate, IPGRI will, upon request from Dr Gil, send a letter to the relevant authorities in Spain recommending *in situ* protection measures.

The Network welcomes and supports the initiative of the Estacao Forestal Nacional in cooperation with the Forest Service to establish Multiple Population Breeding System (MPB) for gene conservation and improvement of the species. The results from this initiative make an important contribution to the Network.

**Objective 5**      **Raise the public awareness of decision-makers of the threats to *Q. suber* diversity**

The Network should make appropriate recommendations to the relevant authorities, based on scientific results, for the implementation of conservation measures.

The press can play an important role but it should only be used when sufficiently solid knowledge has been gained.

Regional authorities can be made aware of the possibilities of measures within the framework of EC regulation 2080/92.

Local, national and international NGOs, such as WWF which is already involved in actions devoted to cork-oak protection in Apulia, should be contacted to request collaboration for the protection of endangered populations.

**General discussion points**

A number of other points were discussed by the group and agreement was reached as follows.

- It was agreed that links will be established with the private industry by members of the Network in order to seek support for some activities.
- Each member will establish a group of persons dealing with *Q. suber* in her/his country.
- Regarding the scope of the Network, it was agreed that the Network would focus only on *Q. suber* but that close links will be established with initiatives working on other *Quercus* species.
- The members of the Network recommend that support be provided to North African countries to conserve their diversity of *Q. suber*.
- The members of the Network agreed to develop a proposal for collaboration with North African countries.
- It was agreed that a brief meeting should be organized at the beginning of 1995 to allow the members of the Network to work together on the development of two project proposals to be submitted to the Commission of the European Communities.

## Agenda

### First meeting, 1-3 December 1994

#### Opening session

Welcome address (D. van Sloten, IPGRI)

Welcome address (O. Souvannavong, FAO)

Introduction to EUFORGEN (E. Frison, IPGRI)

Presentation of the activities of *Silva Mediterranea* (M. Malagnoux, FAO)

Previous activities of the *Q. suber* Network (M.C. Varela, Portugal)

#### Presentation of the situation in the different countries

France (R. Lumaret)

Italy (B. Schirone)

Portugal (M.C. Varela)

Spain (L. Gil)

#### Conservation methodologies

#### Proposals for conservation activities

#### Discussion of research needs

Inventory of *Q. suber* genetic resources in Europe and establishment of a European database

#### Proposals for international cooperation projects

#### Development of a workplan

Future of the Network and discussion on the possible extension of the Network to other European *Quercus* species

#### Final session: discussion and approval of the report

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