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in

Heywood V.H. (ed.), Skoula M. (ed.).
Identification of wild food and non-food plants of the Mediterranean region

Chania : CIHEAM
Cahiers Options Méditerranéennes; n. 23

1997
pages 23-27

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AN EXAMPLE OF NETWORKING

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KEY-WORDS:
IPGRI, WESTERN ASIA, NORTHERN AFRICA, GERMPLASM CONSERVATION, RESEARCH NETWORKS

MOTS-CLES:
IPGRI, ASIE OCCIDENTALE, AFRIQUE DU NORD, CONSERVATION DU MATERIEL GENETIQUE, RESEAU DE RECHERCHE

INTRODUCTION

The International Plant Genetic Resources Institute (IPGRI) is an autonomous international scientific organisation operating under the aegis of the Consultative Group on International Agricultural Research (CGIAR). IPGRI's mandate is to advance the conservation and use of plant genetic resources for the benefit of present and future generations. IPGRI works in partnership with other organisations, undertaking research, training, and the provision of scientific and technical advice and information. IPGRI retains the strong programme link of its predecessor, the International Board for Plant Genetic Resources (IBPGR), with the Food and Agriculture Organisation of the United Nations (FAO).

IPGRI has put for itself four main objectives:

OBJECTIVE 1: to assist countries, particularly developing nations, to assess and meet their needs for plant genetic resources conservation, and to strengthen links to users.

OBJECTIVE 2: to strengthen and contribute to international collaboration in the conservation and use of plant genetic resources.

OBJECTIVE 3: To develop and promote improved strategies and technologies for plant genetic resources conservation.

OBJECTIVE 4: To provide an international information service on plant genetic resources.

IPGRI is carrying out its programme through 11 regional offices. One of these regional offices is for West Asia and North Africa (WANA region), which is extending its activities now to Central Asia. Since 1993, this Regional Office is located in Aleppo, Syria, at the International Centre for Agricultural Research in the Dry Areas (ICARDA).

The importance of West and Central Asia and North Africa as the home to many of the world's agricultural crops, makes the conservation of plant genetic resources in the region a priority. Despite the erosion of natural resources there are still 23 000 plant species in the region, out of which 7100

species are endemic. The conservation of these species and the diversity within each of them, as well as exchanging them with other countries will ensure their survival for future generations.

IPGRI/WANANET

One of the outstanding projects of WANA Group is the establishment of West Asia and North Africa Network (WANANET). This network was established in 1992 during a Workshop sponsored by IPGRI, ICARDA and FAO and attended by 13 countries of the region. The objectives of this network, as recognised by the organisers of the Workshop were:

(1) Establish a WANA Plant Genetic Resources Network and formulate the type/mode of operation and management structure of the network.

(2) Identify common problems and constrains hampering effective conservation and utilisation of plant genetic resources in individual countries and in the region.

(3) Assist National Agricultural Research institutions in developing national genetic resources programmes.

(4) Formulate and prioritise the collaborative research work and strategy in:

  (a) Collection of plant genetic resources of cultivated plants. This includes landraces, primitive varieties as well as wild relatives of each crop.

  (b) Conservation (*ex situ* and *in situ* collections) of plant genetic resources for present and future use.

  (c) Documentation, particularly the development of improved information technology and national and regional databases. In this regard IPGRI helps in offering software and training.

  (d) Germplasm exchange between WANA countries as well as with other countries and International Organisations. IPGRI garantees the safe movement of plant genetic resources for scientific research as well as for agricultural development.

(5) Training and institutional capacity building.

IPGRI has trained more than 200 staff members in WANA region . This includes degree training as well as specialised short training, individual and group training. On-the-job training is part of this activity. Last year a new initiative began to develop speciality degree training in the region: a Master's degree on plant genetic resources will start next academic year in two different universities of the region. One will be stationed in Beirut and it will be in English language, the other will be in French language and it will be stationed in Morocco.

(6) Define the relationship with other networks, mainly crop genetic resources networks.

(7) Formulate recommendations for regional co-operative programme in Plant Genetic Resources.

The Workshop formed a WANA Plant Genetic Resources Committee (PGRC) composed of national co-ordinators and representatives of international and regional institutions.

The following Working Groups were nominated:

Cereals Working Group: The main recommendations of its work are:

(1) Identify gaps in existing collections.

(2) Collecting is recommended in threatened areas.

(3) Continue characterisation and preliminary evaluation.

(4) Identify hot spots screening for biotic and abiotic stresses.

(5) Exchange/share information and germplasm.

Horticultural Crops Working Group: The main recommendations were:

(1) Priority species are *Prunus amygdalus, Prunus armeniaca, Ficus carica, Pistacia vera, Punica granatum* and *Olea europaea* (domesticates and their wild relatives).

(2) Priority countries for each species were also defined according to available diversity.

Pasture and Forage Working Group: The recommendations were:

(1) Pasture and forage genetic resources need more attention, because they are more prone to environmental hazards and human intervention.

(2) Collect germplasm from marginal areas.

(3) Imbalances to be corrected in favour of:

tropical/subtropical and perennials,

arid and semiarid regions.

(4) Descriptor lists are needed for key-forage species.

***In situ* and Biodiversity Working Group**

(1) Complementarity between *in situ & ex situ.*

(2) Public awareness is needed to promote *in situ* conservation of PGR.

(3) Information and training on different aspects of *in situ* are needed.

(4) International seminar/Conference to be held on the subject in Turkey in 1996.

Food Legumes Working Group

(1) Primary crops for Plant Genetic Resources work in WANA are:
faba bean, chickpeas, lentils, field beans, fenugreek, cowpea, lupin, pigeon pea.

(2) *Rhizobium* collection to be developed & maintained.

(3) Develop a regional project on plant genetic resources of food legumes.

Industrial Crops Working Group:

(1) Priority species are: *Saccharum, Beta, Sesamum*, sunflower, flax.

(2) Fibre crops are more prone to genetic erosion. More work is needed to conserve & utilise them.

(3) A regional database on industrial crops is needed.

(4) Linkages to certain networks – e.g. International *Beta* network.

The Steering Committee develops the terms of reference for the Working Groups. It also assists the Working Groups to develop the plant genetic resources work in the region by all possible means, including formulation of projects, assessing priorities, monitoring projects and identifying potential donors. This is based on country reports as requested by national coordinators, in view of the overall objectives of the network.

The first phase of WANANET was from 1992 to1994. During this phase the countries in the region which have national Committees for Plant Genetic Resources increased from two to ten. Other countries still have no National Committee. WANANET participated in the adoption of the Global Plan of Action at the fourth International Conference and Programme for Plant Genetic Resources (ICPPGR) that was co-ordinated by FAO in co-operation with IPGRI and other organisations. A genetic diversity workshop, Germplasm Evaluation and Utilisation Workshop and a

workshop on CPPGR country reports preparation and the subregional meetings of CPPGR were held.

The meetings of the Working Groups dealt with problems and issues related to their mandated crops. Each Working Group meets once a year to discuss and find solutions to common problems and to exchange experience in taking care of plant genetic resources as outlined before. Some of the crops with which WANANET is working are mandate crops of other institutes. (ICARDA, ICRISAT and CYMMIT), like wheat, barley, food and feed legumes; others are what is called neglected crops as pistachio, almond, fig and other fruit and nut trees. It is evident that the focus is more on the second group than on the first.

The network is a means of information and plant genetic resources exchange among the member countries. Research and development projects are developed and funded regionally. IPGRI is not a funding agency: it helps technically and aids in finding a funding agency. This is mostly done in co-operation with other organisations like ICARDA, FAO and IDRC.

The IPGRI/WANA office acts as secretariat for WANANET. It serves also as a database for information distribution. This takes the form of request-answer service. It is done either in the form of hard copy or on computer diskette. At the same time IPGRI/WANA distributes all IPGRI publications to WANANET members free of charge.

IPGRI/WANA Newsletter is a forum of the network. It communicates news of research, workshops, meetings and publications. It is published in English and Arabic. Four numbers are issued each year.

LESSONS LEARNT FROM WANANET

Evaluating the work of WANANET since its establishment in 1992 to the present, we can conclude the following points:

(1) National coordination

Since Plant Genetic Resources are related to different crops, field crops, fruit trees, vegetables, industrial cropsetc., and since the management of these crops may be distributed between different institutions besides the Genetic Resources Unit or Genebank, difficulties arise in WANANET, because each institution has its own programme. Besides, the Plant Genetic Resources programme has to be strongly linked to breeding programmes so that it has an economic dimension, otherwise it will turn into a kind of a museum collection. For all these reasons it was necessary to have a National Coordinator and a National Committee on Plant Genetic Resources. The Earth Summit (UNCED) in 1992 and the signing of the Convention on Biological Diversity (CBD) and the establishment of Global Environmental Facility (GEF) helped to speed up these developments. Furthermore, the preparatory process for the International Technical Conference on Plant Genetic Resources that was organised by FAO in cooperation with IPGRI helped also to accelerate these arrangements.

(2) Communication and Facilities

There are, at present, very great differences between institutions and countries with regard to speed of communication and facilities, ranging from post, telephone, telex to E-mail. Since the Mediterranean Countries include developed as well as developing countries, this problem of difference in communication facilities exist. One of the stumbling blocs of WANANET is how to communicate information in a speedy and efficient way. It is on the agenda of WANA Group to find funding for installing E-mail for each Plant Genetic Resources National Coordinator to facilitate easy and speedy communication.

(3) Orientation of WANANET

IPGRI's objectives as mentioned before are strongly oriented towards conservation of plant genetic resources. Country programmes are more linked with the use of plant genetic resources. Breeding programmes are much more developed than Genetic Resources Units or Genebanks. This situation has a lot to do with the relation to agricultural development. WANANET has to define its partners: are they researchers working on plant genetic resources? or the plant breeders? or both?

This is essential for the future of WANANET.

(4) Conservation of Plant Genetic Resources

An essential part of WANANET is *ex situ* conservation of genetic resources: genebanks in the form of seed, tissue culture, or field genebanks. *In situ* conservation and on farm conservation started recently and are gaining importance as a complementary to *ex situ* conservation. WANANET needs to develop in this direction.

(5) Propagation and evaluation

Plant Genetic Resources are collected as samples or accessions. To make use of this plant material in research or in breeding programmes, it is necessary to propagate it and evaluate it according to agricultural traits needed by the breeders. In case of wild relatives, it is necessary to evaluate the response of the plant to agricultural practices. This is a domain which WANANET has to develop for the benefit of its members.

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