

Global Citrus Germplasm Network: Progress Report, Orlando, 3-8 December 2000

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The proposal to create a Global Network for the conservation and utilisation of the genetic diversity of Citrus and its relatives was officially endorsed by the FAO Intergovernmental Group on Citrus in April 1996. Subsequently, the technical and scientific protocol for such an international cooperative programme was elaborated and finalised during the FAO supported Symposium organized by Prof. Gene Albrigo on the 'Identification and Conservation of Genetic Resources of Citrus and its Relatives', held in Sun City, South Africa in May 1996. The GCGN was formally established under the aegis of FAO, in Acireale, Italy, in December 1997, during the sectoral meeting of MECINET on Global Cooperation for Citrus Germplasm Conservation and Use.

Main aims of the network are to coordinate initiatives dealing with Citrus genetic resources in the different regions of the world and to promote effective participation of the existing networks (MECINET, IACNET, CLAM, NeSCRA) in GCGN activities.

After the Acireale meeting, the GCGN started to explore the possibility to locate financial resources to allow the network to implement more its proposed activities. A project proposal was developed and brought before the MiPAF (Ministero per le Politiche Agricole e Forestali of Italy) where it is still under examination for approval. AGPS/FAO more recently funded the GCGN for the publication of the first newsletter issue.

The General Coordinator carried out a mission in March-April 1998 in Argentina, Brazil, Cuba, and the USA (Florida) in order to promote cooperation among these countries on genetic resources conservation and utilisation of Citrus and Citrus relatives. The aim of this mission was also focusing to strengthen collaboration between the Germplasm Working Groups of IACNET and MECINET, under the umbrella of the GCGN. In agreement with the scientists responsible for Citrus germplasm in the countries visited, two research subjects were proposed with a view to facilitate GCGN cooperation among institutions on common topics related to citrus diversity conservation: 1) establishment of a common computerised citrus germplasm information system, and 2) preparation of an inventory and evaluation of the existing germplasm in South American countries and in the Caribbean area.

As regards the first point, two common data bases were considered: the EGID common database system, managed by the San Julien Station, Corsica, France, and the system used by the Instituto Valenciano de Investigaciones Agrarias, Moncada, Valencia, Spain.

As a consequence of this mission, in September 1998, Catalina Anderson was able to organise a "citrus database work day," in Concordia, Argentina, to which several experts from Argentina and Uruguay attended. This was the starting point for use of the EGID database of Roland Cottin from San Julien, the most consulted database by GCGN and IACNET personnel. This should not exclude the possibility in the future that the other databases could be included also in the GCGN resources or contribute in improving computerized systems.

As regards the second point, Dr. Anderson was asked to prepare a paper on "germplasm situation and evaluation for Argentina and neighboring countries", while Orlando Passos was requested to prepare a paper for Brazil, Maria del Carmen Perez for Cuba, and Gene

Albrigo for the Caribbean area.

The papers were to be prepared in view of organizing a meeting of the GCGN in South America and held jointly with IACNET in Concordia, Argentina, in 1999. This meeting was postponed.

Furthermore, as discussed during the Acireale meeting, initiative was also taken for organizing a meeting in China, in late 1999. The basic theme of the meeting was to prepare an inventory of the existing germplasm in China and in the other Eastern countries for its evaluation and utilization. Moreover, the constitution of a citrus germplasm sub-network for Asia and the Pacific could be formalised in such a meeting. For this reason contacts were established with Prof. Xiuxin Deng and Prof. Chen Zhusheng for the organisation of the meeting at Huzhong Agricultural University of Wuhan and/or at the Citrus Research Institute in Chongqing. Moreover, contacts were also established with the different experts from Japan, India, Australia, Thailand, Vietnam, Philippines, Malaysia, and Singapore in order to ascertain if they were interested in attending the meeting, and to prepare the scientific documents on citrus germplasm conservation and use in their countries. Due to the complex organisation of the meeting it was decided to postpone it. Unfortunately that meeting has not been held, but the basis for the organization of a GCGN meeting in China are still valid today and we hope to be able to hold the meeting in 2001-2002. In this case, I am renewing the GCGN request to the FAO to obtain financial support for the organisation of this important meeting in China.

Another important initiative decided in Acireale was to establish an African Citrus Network. Dr. Hannes Breedts from the Institute for Tropical and Subtropical Crops (ITSC), Nelspruit, South Africa was asked to take initiatives to call a meeting for the constitution of such a network. Unfortunately, no action has been taken so far, but I am encouraging ITSC or any of the appropriate African institutes to accomplish this important task.

A proposal for organizing regional citrus networks in Asia and Africa was also discussed during a workshop on Citrus Germplasm Conservation, which was held 6-7 October, 1997 in Brisbane, Australia in conjunction with the International Symposium on Biotechnology of Tropical and Subtropical Species sponsored jointly by ACIAR (Australian Centre for International Agricultural Research) and IPGRI (International Plant Genetic Resources Institute). It was agreed that such networks that are focusing on citrus genetic resources, should receive high attention by international organizations such as IPGRI, ACIAR, and FAO which could play a very important role in harmonizing activities and providing technical guidance and financial support. Even this very exciting proposal has not developed further at this time.

During the "Second General Meeting of MECINET," Adana, Turkey, August 5-September 7, 2000, a joint project was proposed, between GCGN and the 'Genetic evaluation and utilization of citrus working group' of MECINET, for carrying out a cultivar field trial in all member countries of MECINET. The purpose was to study the performance of varieties and rootstocks in the different climate and soil conditions for singling out and recommending those ones which are more suitable for the citrus regions of the Mediterranean. The proposed project should be designed in line with the model and the experience of the Italian finalised project, "Liste di orientamento varietale dei fruttiferi (List of Recommended Fruit Varieties)" and "Liste di orientamento varietale degli agrumi (List of Recommended Citrus Varieties)," which are actually led by the GCGN General Coordinator. According to this programme, Dr. Androula Georgiou, from Cyprus, took the initiative to organize a meeting of experts for facilitating the scientific implementation of the project.

A project proposal on "Improvement of the citrus sector in the Mediterranean" by setting up common conservation strategies for free exchange of healthy citrus genetic resources was discussed at the 1st technical joint meeting of MNCC (Mediterranean Network on Citrus

Certification) and MECINET (Mediterranean Citrus Network) members, which was held in Algiers, 3-7 October 2000. The aim of the project is to enhance the citrus sector by a sustainable utilisation of healthy citrus genetic resources, in order to meet the industry need and to encourage free exchange of these resources in the Mediterranean. It will be coordinated and placed under the umbrella of FAO and CIHEAM/VALENZANO, Italy. The project soon will be submitted for multi-donors funds.

The first issue of the GCGN Newsletter was published recently and copies are being distributed to the network members.

To start moving a complex mechanism such as the GCGN involves a great effort, nevertheless the network should probably have carried out a larger activity so far. The GCGN Coordinators should have taken more initiative in stimulating ideas on research programmes for new proposals, and established better communications between the Working Group Coordinators and the General Coordinator.

I would therefore recommend that communications among all members of the network should increase. In fact, it frequently happens that people have bilateral communication without spreading the information to other members, which is not the spirit of our network.

Lack of even a minimum amount of funding does not encourage a frenetic activity but it does not justify keeping it at an unsatisfactory level.

The tasks and the range of GCGN activities were correctly defined when the network was established in Acireale. I would agree that the subjects and topics of the network are complex and wide, consequently it is essential that the working groups decide to finalise research priorities to be developed in line with the topics formulated by GCGN in Acireale. On this subject, I think that priority should be given to programmes concerning the characterisation, evaluation, and cleaning of germplasm in order to allow the exchange of planting material for establishing common and definite breeding programmes, which could, in a relatively short time, resolve some of the most serious citriculture problems in the different countries related to productivity and disease resistance.

Every day I notice the constitution of new NGO's or associations in different fields dealing with germplasm conservation and use. In many cases, such new body are not composed by specialists of the sector, however, these initiatives are obtaining funding from foundations, banks, or governments relatively easily. I wonder, if this is the *conditio sine equanon* to obtain funds for our network; to transform it into an NGO, an association, or a society. In fact, although we are the only qualified citrus scientists in the world and, for the financial institutions it seems that we do not exist at the international level.

Perhaps it is now time to take the initiative to establish the network as a legal entity, in order to be able to attract substantial additional investments, as a means of strengthening its activities.

I personally hope that in the future, the excellent work of the networks in general will be used by your governments to support their deliberations in the specialised policy fora in order to propose projects and research programmes for new investments in the citrus sector. Each one of you, as scientists, could actively contribute towards raising government awareness of the need and opportunities for such policy formulation.

The above mentioned proposals could be analysed during this meeting but could also be the subject of a new meeting of the coordinators of the different working groups to be held next year, possibly in Rome.

Before closing my speech, I would like to transmit the greetings to all of you from Dr. Umberto Menini who was not able to be with us today, but as you know he was the father of the different FAO networks dealing with Citrus research and development: IACNET, MECINET, and lately the GCGN.