Draft June 15, 2001

Discussion Paper
National Inventories, EURISCO and Central Crop Databases: communicating vessels

Introduction

It is only a few years ago that the documentation of PGR collections was written on cards stored in a drawer. Since the introduction and the following popularization of computers the quantity and quality of documentation increased considerably. Once the PGR data were computerized the data of different genebanks were combined on a crop to crop basis to improve access to the PGR for the user and to allow a more efficient international coordination of PGR activities. This activity was one of the major achievements of the ECP/GR working groups, but also in other frameworks so called Central Crop Databases (CCDBs) were created.

With the further development of information and communication technology other options became available. Data warehousing techniques allow (semi-) automatic gathering and combination of information from many sources into a single database. When applied to the European PGR situation, such technology allows for the creation of one central repository of PGR information.

The majority of European countries signed the Convention on Biodiversity (CBD), and thus committed themselves to the creation of a 'National Inventory' of PGR in their country. Given the state of technology, these National Inventories could easily be used as the data source for a European PGR Search Catalogue 'EURISCO'. Within the Fifth Framework Program of the European Union a project was funded that was to set up the necessary infrastructure: 'the Establishment of a European Plant Genetic Resources Information Infra-Structure' abbreviated as EPGRIS. This project will support European countries to create their 'National Inventory' and to make it available for automatic processing, and also to create the software needed to automatically combine those Inventories into EURISCO, an on-line accessible database.

For CCDB managers this can be a confusing development. Has their work become redundant; what will be their future role once EURISCO is established? But also for the curators of National Inventories the situation might be unclear. Therefore, the roles of the National Inventories, EURISCO and the CCDBs should be reconsidered, and their interactions described.

Content and role of National Inventories

By signing the Convention on Biodiversity (CBD), most European countries committed themselves to create some sort of National PGR Inventory, as part of the Clearing House Mechanism (CHM) of the CBD. Furthermore, the National Inventories can be seen as the implementation of Global Plan of Action, Priority Activity - Institutions and Capacity Building - 17 'Constructing comprehensive information systems for plant genetic resources for food and agriculture'.

The actual content and management of the National Inventory is thus a national responsibility. The content of the National Inventories should be flexible and under the mandate of each country. Also the level of management of the data, i.e., the frequency of updating, the maintenance of the data quality and completeness, the access to the information is the responsibility of the individual countries.

The National Inventories are likely to contain information relevant to EURISCO, the European PGR search catalogue. But obviously they might also contain other information about the PGR in the country.

Content and role of EURISCO

EURISCO coming out of the EPGRIS project will be the addition of passport data on individual accessions in the European National Inventories, and will contain passport data of as much PGR accessions maintained in Europe as possible. These passport data will be based upon the IPGRI/FAO Multi Crop Passport Descriptor List (MCPDL). The main source of data will be the 'EURISCO accessible' National Inventories that encompass the descriptors of the MCPDL as well. The available CCBDs will be used as data source to create an initial data set: the CCDBs will be combined, and the resulting data set will be split up, one data set per European country maintaining the accessions. The countries where the National Inventory is not available yet will be approached and asked if their data set (from the combined CCBDs) can be updated, complemented by collections of other crops and loaded into EURISCO. Possibly some major collections in countries without National Inventory will be added.

If the data meet certain format, coding and integrity requirements, they are loaded in EURISCO as they are. There will be no re-naming of taxa, no checking of plausibility. Tables with taxonomic synonyms will probably be added to improve the search facility.

Since EURISCO will be updated frequently, as often as the National Inventories are updated, it can be considered a 'monitor'; always as up to date as the National Inventories. Only for the countries without National Inventory, EURISCO will be a 'snapshot'.

A web-based interface will allow anybody to easily approach and search the European National Inventories, just like they can use SINGER to search the CGIAR collections and GRIN to search the collections of the USDA. Searches in EURISCO will either result in statistics, or lists with passport information, and links to the maintaining institutes where additional information can be obtained. The target group is very large and includes all users or potential users of PGR, plant scientists, and policymakers; the focus however would be the support for conservation and coordination requirements.

Content and role of CCDB

There are over thirty CCDBs documenting about half a million accessions in Europe. (In total Europe holds about two million of the world's six million accessions in ex situ genebanks.)

The current CCDBs were compiled by making an inventory of existing collections, approaching the maintaining institutions and asking for the data in a preferred format, receiving, transferring, and finally loading the data sets in a database. This is a laborious process, involving much correspondence and data conversion work. With the increased use of the Internet and the adoption of the IPGRI/FAO Multi Crop Passport Descriptor List, the job of creating a CCDB has become easier, but it is still much work. As a result most CCDBs are a 'snapshot'. But often they are quite complete, also including small collections, or collections that are not usually included in the PGR networks. Furthermore, usually much expertise of the crop is used in the compilation of the database, for example standardizing taxonomic classification.

CCDBs are compiled by crop experts for a specific target group: other crop experts. These include the breeders of the crop, curators of other collections, and scientists working on the crop. Therefore, taking advantage of the upcoming existence of EURISCO carrying an important minimum set of passport data, the CCDBs could serve the more crop specific needs, in particular by focussing on characterization and evaluation data. Hence, CCDBs would be strengthened as support tools for research and breeding.

Complementarity of National inventories, EURISCO and CCDBs

The National inventories, EURISCO and the CCDBs should be seen as a complementary package.

The National inventories are a national responsibility in relation to creating national Clearing House Mechanisms (CHM) under the CBD, and will be designed according to national needs. They would however include the MCPDL as a minimum requirement to be used for EURISCO.

EURISCO can be seen as an important European contribution to the CHM supporting in particular the first two objectives of the CBD: conservation of biological diversity, and the sustainable use of its components.

In addition, the CCDBs would complement these roles of EURISCO by serving specific user groups with targeted information and analyses that allows further optimisation of both conservation and utilisation.

As a package, the above three elements (National inventories, EURISCO and CCDBs) complement each other effectively and will provide a useful tool for a wide range of users.