

## **Proposal Project for Phase VIII (2009-2013) of the Brassica Working Group**

### BACKGROUND AND JUSTIFICATION

During the last meeting of the Brassica WG held in Olomouc was decided to focus activities in the priority actions to the development of AEGIS (A European Genebank Integrated System). Besides, all the members proposed to point the attention on *B. rapa* which could be defined a multicrop species for its several utilisation and on wild *Brassica* species (n=9) diffused on Mediterranean basin. For these species few are the accessions held in the European collections and was suggested to point our attention on Balkan, Mediterranean, Eastern and Western European areas.

### OBJECTIVE

The general idea is to collect and/or set up an European core collection of about 100 accessions of *Brassica rapa* and 20 accessions of wild *Brassica* species (n=9) for characterise and evaluate them for several aspects such as bio-morphological traits, oils and nutraceuticals compounds, DNA analysis, etc. All the members of the Brassica WG will contribute to participate in relation of its main interest and competences and the results will be developed in AEGIS view. The activities will be mainly cofinanced by specific projects which the members are carrying out and/or by the economical supports of breeders, research institutes/universities which will be interested in regeneration, characterisation and evaluations activities of the future AEGIS. The accessions will represent the Most Appropriate Accessions (MAAs) of the future AEGIS. The characterization and evaluation activities will include common standards and descriptors.

Besides, as concerns with wild *Brassica* species will be set up the strategies for in situ conservation of them in the frame of the recently approved GENRES project AEGRO. This project, started last October, will focus for three years on Sicilian wild *Brassica* species. The results will be very useful for individuating new tasks in view to set up a network of CWR reserves for safeguarding these important genetic resources. For these aspects is already foreseen to set up an inventory of the areas of major interest both for the in-situ and on-farm conservation to be involved in future cooperative programmes.

### WORKPLAN

The activities foreseen during the four years of the ECPGR Phase VIII will be carried out among both the Institutions which have till now expressed interest to cofinance this project which at this moment are the DOFATA-University of Catania (UNICT), the Centre for Genetic Resources of Wageningen (CGN), the Institute of Sustainable Agriculture of Cordoba (CSIC-Spain), the University of Tras Os Montes and Alto Douro of Vila Real (UNIVR), University of Aarhus (UNIAA). WG members will discuss about the minimum plant descriptors which will be similar of those utilised fo the GENRES project 108-112, antioxidant coumpounds will be choise common analysis protocols whereas for DNA molecula analysis will be utilised AFLP and SSSR techniques.

The characterisation fields will be set up at DOFATA where the climatic conditions are optimal both for *B. rapa* and for wild *Brassica*. Each year will be grown about 30 accessions both of *Brassica rapa* and wild *Brassica* species in view to characterise evaluate them.

As concerns with the antioxidant and nutraceutical compounds, samples of roots, leaves and inflorescences of *B. rapa* acessions and of leaves of *Brassica* wild species accessions will be

freeze-dried by DOFATA and send to IAS-CSIC and UNIVR, whereas as concerns with molecular analysis DOFATA will extract the DNA from young leaves samples. The DNA samples could be analysed by UNIAA, CGN and DOFATA. Of course these activities could be shared also with other public and private institutions which can cofinance them. At the end of the project all data acquired will be inserted in the Bras-EDB.

#### PROJECT COORDINATION AND ADMINISTRATIVE STRUCTURE

The project will be coordinate by the Brassica WG Chair and Vice Chair with the support of all the members which are actively involved in it. The definitive project working plan and the budget for each activity and Institution will be discuss among the active members involved in it. Brassica WG will informe the ECPGR secretariat in view to organise the budget tranfer to the Intitutions involved on the foreseen activities.

During March of the second project year will be organised the Brassica WG meeting in Catania organised by DOFATA in view to visit the characterisation field, verify the results of the activities carried out during the first two years and plan/improve the activities of the final two years.