



Umbellifer Crops Working Group

Phase IX Progress Report February 2016

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Overall Comment on WG Activity

The last meeting of the WG was held in the previous phase (26th-28th June 2013, St Petersburg). An outline of activities for Phase IX of ECPGR was produced at this meeting, and a new Chair and Vice Chair were elected. In the intervening period, the restructure of ECPGR and changes to the makeup of the WG meant that progress towards some of the targets was interrupted. There has been new interest in different aspects of the conservation and characterisation of relevant crop germplasm due to the inclusion of additional crop experts from ECPGR member countries after the abolition of the limit of one WG member per country. This resulted in a shift in interest towards plant genetic resources research in addition to conservation.

ECPGR Activity Grant Scheme

A proposal for the ECPGR Activity Grant Scheme ("UMBELAEGIS") was developed during 2015 based on the expressed interest of WG members. The project would have focused on characterisation of fennel accessions through metabolite profiling. Unfortunately this proposal was not successful, and efforts are underway at the current time to develop another proposal, bearing in mind the comments made by the assessors.

Designation of material in the European Collections

A total of 371 accessions have been designated by institutes GBR006 and DEU146 as part of the European Collection (data taken from EURISCO, February 2016). The following genera are included: *Apium* (20 accessions), *Chaerophyllum* (7 accessions), *Daucus* (332 accessions), *Pastinaca* (12 accessions). Future work in Phase IX could move towards increasing the number of accessions of crops relevant to the WG in the European Collection and identifying material of significance such as crop wild relatives and landraces which would ideally be included.

Status of Tasks on Current Phase IX Workplan

Task 1: Analysis of the AEGIS list

The number of accessions flagged as part of the European Collection is relatively small. An earlier project identified a list of accessions of cultivated carrot potentially suitable for AEGIS, and this was disseminated to WG members for the attention of collection curators. However, it appears that there are barriers to the formal nomination of accessions to the European Collection. A consultation of WG members may provide useful information as to why so few accessions have been nominated.

Task 2: Improvement of collection quality

This task requires a better coverage of relevant crops within the European Collection for it to have a meaningful impact. This work will be carried forward - Organization and monitoring of the increase in quality, including level of regeneration and safety duplication of the European Collection, with priorities on critical material and identified gaps.

Task 3: Characterization and evaluation

The WG members responsible for this task have reported that EURISCO is being adapted to handle characterization and evaluation data. It is proposed to wait until this functionality develops before further collation of data for this task. There may be scope to look at other techniques such as image analysis to ensure characterisation data can be easily curated in the future.

Task 4: Landraces

This task remains a potential priority for the WG. Reported progress has been limited, however it is desirable to consult the WG on how this task could be addressed over the rest of the phase.

Task 5: Wild relatives

Work is required to understand the outputs of other projects (such as the Crop Wild Relative project managed by the Crop Trust and Kew Gardens) and to translate this into relevant targets for the WG. This work should be re-appraised by the WG during Phase IX and new targets set.

Future Plans

From the Chair's point of view, a refresh of the Phase IX workplan is required in order to progress entry of material into the European Collection, and to determine the nature of gaps (if any) in crop genepool representation and geographic origin of material conserved in European Genebanks. There may be opportunities to undertake capacity building in terms of training or resources for taxonomic identification, particularly of wild relatives, and in better utilising techniques such as image analysis in characterisation work. A refreshed workplan will offer the opportunity to set realistic goals for the WG together with suitable completion dates for tasks so that future progress can be tracked more easily.