

Project Proposal Phase VIII (2009 – 2013) of the Fruit Working Group Network

1. Background and justification

The FNCG was quite under difficulties these last months due to the fact that the Chairman of both *Prunus* WG and the FNCG had to leave his professional position. Second event is the fact that the *Malus* Database Manager changed and a new approach need to be developed.

The *Vitis* WG is partially funded by EU tanks to an AGRO GENRES project and the *Prunus* WG is also partially involved inside the case-study approach coordinated by the AEGIS team. The group is building a strong collaboration between their different components with the view to work more and more in concert and to share experiences and methodology tools. Several meetings were organized where *Vitis*, *Prunus* and *Malus/Pyrus* WG members and/or experts were co-actors of actions: e.g. Ad Hoc Meetings on (1) The use of molecular markers, (2) Harmonization of the four Databases, (3) Definition of common methodologies concerning *a*. The management of the recurrent problem of synonyms, *b*. The concept of “Preferable Names” and “Euonym”, *c*. The “Country of Historic origin”, *d*. The traceability of the material and the link with bibliographic references of the cultivars encoded as accessions in the Fruit Databases and also, *e*. The definition of common rules for the inclusions of fruit photographs in the DB’s.

This way of work in parallel with the own WG activities is regarded as very fruitful and the project presented below want clearly to continue to develop such synergies. The group wants also to keep alive the FNCG activities because of the great mutual interest to share the work and to try always to build a team that works in concert.

We consider that all the work carried out by the Databases Managers, the Chairmen (meeting organisation + reports + keeping the group alive) and the local meeting organizers is given as “on kind” service for the right cause, therefore it does not appear in the budget colon “Self”.

2. Objectives of the project (based upon the ECPGR-priorities of the current phase)

1. Task sharing (AEGIS) and capacity building

By taking the *Prunus* WG as partner of the AEGIS project taking “Cherry” crop as case-study, the Fruit Working Groups developed concepts for the establishment of decentralized European collections. The next challenge for the Network is to move from the theoretical concept into the practical implementation.

Prunus is one of the four model crops chosen for the AEGIS initiative and a specific workplan for Phase VIII has just been defined by the AEGIS *Prunus* subgroup. The *Malus/Pyrus* and *Vitis* Wgs should be aware of the direction in which the *Prunus* group will move during Phase VIII. An *Ad hoc* meeting on AEGIS implementation for vegetatively propagated fruit crops should be planned during Phase VIII (2012?). Inside the *Malus/Pyrus* WG circulate also the approach of closer regional collaboration and task sharing between some collections that should start concretely the work of the AEGIS concept. The work of defining synonyms, the degree of true to type, the country of historic origin will be continuing during this phase as one of the basic step of the AEGIS concept.

2. Characterization and evaluation

One of the first priorities beside and in parallel of the AEGIS actions is to define more precisely the identity of the accessions that are encoded in the CCDB. Two steps are at the moment planned, firstly the incorporation of photographs in the DB’s and the first priority characterisation of a priority sample of accessions. For the future, we are in front of the reality that it can be hard work for the database managers to extract datasets from curators, even from those belonging to the Working Groups. One

solution suggested by the *Prunus* WG would be for the database managers to have a budget from which they could pay a few hundred Euros for a dataset.

3. *In situ* and on-farm conservation and management

As perennial trees, this approach fit well with fruit crops. So far, the Fruit Network is very interested in this approach that is already applied in some countries as a complementary strategy of the safe duplication of well documented *ex situ* collections. This approach will be more deeply discussed with the view to edit common guidelines for the implementation of the concept by organizing eventually the Ad Hoc Meeting with key stakeholders during Phase VIII if it would not be possible to organize it during the last months of 2008.

4. Documentation and information

We strongly orient our actions on the harmonization and the sharing of experiences and tools between the four fruit DB's. Beside that, the new *Malus* DB will be developed in line with the others because it is still in a "MS Acces" format and is not yet available by Internet. We consider the DB as a key tool for the common sharing and dissemination of information to potential users of genetic resources and internally for a better management of the European collections. In order to maintain and add new information to the four European Central Crop Databases, a request of funds for management and implementation is made especially for the *Prunus* DB.

Moreover, as the Fruit Network Co-ordinating Group suggested at the meeting of the NCGs in Bonn in March 2006, the flow of information between curators, ECCDB, EURISCO and National Focal Person (NFP) needs to be clarified. In order to help improve the flow of information from the thematic Networks, there should be representatives of vegetatively propagated crops of the Documentation & Information Network.

3. Workplan

Activity - No.	Activity	Output	Milestone	Time	Respons. and comments
Meetings					
1	Network Coordinating Group and Fruit DB's Manager Meeting	Discussion on common goals, the possibility to jointly apply for project funding, and the organisation of the network. Report to the ECPGR.	Meeting with 3 WG chairs, 4 database managers & 3 extra members	2009	NCG Chair
2	Meeting of <i>Vitis</i> WG	Organisation of the meeting. Report to the ECPGR.	Meeting with all participants	2010 (2 nd semester)	WG Chair
3	Meeting of <i>Prunus</i> WG	Organisation of the meeting. Report to the ECPGR.	Meeting with all participants	2010	WG Chair
4	Meeting of <i>Malus/Pyrus</i> WG	Organisation of the meeting. Report to the ECPGR.	Meeting with all participants	2011	WG Chair
5	Ad Hoc Fruit Database Managers Meeting + FNCG Chair	Harmonization of the 4 DB's and sharing the work	Work prepared before the meeting and organization of the meeting	2011	FNCG Chair
6	Network Coordinating Group meeting	Discussion on phase IX plans of the network	Meeting with 3 WG chairs	March 2013	NCG chair & WG chairs

Fruit ECCDBs					
1	European <i>Prunus</i> Database	Update of the Cherry DB	Updated Cherry DB on-line	2009	DB manager
2	European <i>Prunus</i> Database	Creation of DBs for other <i>Prunus</i> crops	New DBs	2012	DB manager
3	European <i>Vitis</i> Database	Maintenance and update	Updated DB on-line	2009-2012	DB manager
4	European <i>Pyrus</i> Database	Maintenance and update and adaptation of the "SynoPyrus" software for other fruit crops and transfer in a format compatible with Internet	Updated DB on-line	2009-2012	DB manager
5	European <i>Malus</i> Database	Maintenance and update	Updated DB on-line	2009-2012	DB manager
6	Harmonization of all four FCCDBs	Sharing modules	Updated DBs	2009-2012	DB managers
AEGIS meetings					
1	Inauguration meeting	Organisation of the meeting. Report to the ECPGR.	Meeting with xx participants	2009?	WG Chair, AEGIS coord.
2	1-year review meeting	Organisation of the meeting. Report to the ECPGR.	Meeting with xx participants	2010?	WG Chair, AEGIS coord.
3	3-year review meeting	Organisation of the meeting. Report to the ECPGR.	Meeting with xx participants	2012?	WG Chair, AEGIS coord.
4	<i>Ad hoc</i> meeting on AEGIS implementation for vegetatively propagated fruit crops	Discussion on implementation of AEGIS for other fruit crops (phase IX plans of the network)	Meeting with 3 WG chairs and the AEGIS <i>Prunus</i> group	2013?	NCG Chair, WG Chairs, AEGIS coord.
Implementation of AEGIS (<i>Prunus</i>)					
1	Complete minimum passport data in EPDB	Passport data	Updated Cherry DB on-line	2009	Curators and DB manager
2	Choose genotypes for AEGIS		List of genotypes	2009	DB manager?
3	Choose MAAs (primary + reserve if available)	Selection of about 1850 MAAs	List of MAAs	2009	Cherry committee
4	Safety duplication	Propagation of safety duplicates where necessary and plant them	Safety duplicates	2010	Relevant curators
5	Confirm the identity of primary and reserve accessions: ie photo, morphological, molecular	Photographs, morphological and molecular data of about 1850 MAAs	Updated Cherry DB on-line	2011	Curators and DB manager
6	Health status monitoring	Check health status of chosen accessions and notify DBM	Updated Cherry DB on-line	2011	Curators and DB manager
7	Revise AEGIS MAAs list	Update AEGIS MAAs list and acquire new candidates	New list of MAAs	2011	Curators and DB manager
8	QMS implementation	Implement realistic QMS in relevant genebanks	QMS	2012	Relevant curators
9	Distribution	Distribute in response to request		2012	Relevant curators
10	Publications and		Publications and	2012	Relevant

	newsletter		newsletter		curators
11	Promotion	Promotion in about 12 involved countries		2012	Relevant curators
Work Plan of the <i>Malus/Pyrus</i> WG					
1	1. Harmonization of the <i>Pyrus</i> and the <i>Malus</i> ECCDBs in accordance with the Cherry DB structure & Updating of the <i>Malus</i> & <i>Pyrus</i> Databases				
1.1	<ul style="list-style-type: none"> - Harmonize the <i>Malus</i> DB with the Prunus and Vitis DB standards and continuing the process of harmonization the DB and sharing experiences between Fruit DB managers. - Ad Hoc Fruit Database Managers meeting are planned for planning this work and also with the view to share the experiences and capacities 	Harmonization of this management tool and sharing works and tools between the DB's managers		2009-2012	New <i>Malus</i> DB manager in collaboration with the other fruit DB Managers
1.2	<ul style="list-style-type: none"> - Prepare standardized templates with passport data, EURISCO and AEGIS descriptors according to the list of "priority descriptors", asking to check the identification data from the curators and their collections, with their local geographic, soil, climate and methods used + synonyms data + standards for fruit photographs and send it to all curators asking them to complete, to validate and to update their data. 	Update the database; prepare the work for the next step of sharing the responsibilities.		2009-2012	Database Managers
1.3	Make the link between Descriptors Task Forces and DB managers in order to give clear information to the curators on which data need to be provided and how	Harmonization of the work		2009-2012	Chairman + Descriptors task forces
1.4	<ul style="list-style-type: none"> - All Working Group members to meet periodically their national curators, stimulate them and asking them to send their data and encourage provision of minimum passport data and all available data from all 	Stimulate the work up to the local curators		2009-2012	All WG members

	collections in their country				
1.5	- Send data in the requested format to the DB manager: - all currently available data even if not all descriptors are documented (minimum data = accession name + accession number + holding institute) - "National collections accessions" - if available	Updating the DB's		2009-2012	All WG members
2	2. Standardization of the use of Molecular marker as results of the workshop (with <i>Prunus</i> and <i>Vitis</i> people) at EMR East-Malling, 7-8 December 2006. Publication of the validated results and start a first set of accessions from different collections.	<i>Need of harmonization for comparison of the data and enhancement of the efficacy by sharing the tasks and by open the data throughout CDB.</i>		2009	<i>Malus/Pyrus : <u>Kate Evans</u>, B. Gelvonauskis , <u>F. Laurens /</u> <u>L. Feugey.</u></i>
3	3. Update and improvement of characterization and evaluation descriptors for <i>Malus</i> and <i>Pyrus</i> and their inclusion in the DBs				
3.1	- Validation of the compiled descriptors lists already developed for <i>Malus</i> and propose reasonable adjustments. - The work is initiated and need to be finalized during the start of Phase VIII	Harmonization of common tools for <i>Malus</i>		2009	Task Force: <u>M. Kellerhals</u> (leader) + <u>all WG members</u>
3.2	- Develop and submit a proposal for a technical leaflet with the most important validated priority descriptors for apple to produce a waterproof document for field work; after acceptance, send the standardized document to all WG members	Harmonization of common tools for <i>Malus</i>		2009	<u>M. Kellerhals</u> and <u>M. Lateur + all WG members</u>
3.3	- Compile all descriptors lists already developed for <i>Pyrus</i> and propose reasonable adjustments	Harmonization of common tools for <i>Pyrus</i>		2009	Task Force: <u>M. Lateur</u> and <u>M. Bergamaschi</u> (leaders),

3.4	- Develop and submit a proposal for a technical leaflet with the most important descriptors for pear to produce a waterproof document for field work; after acceptance, send the standardized document to all WG members -	Harmonization of common tools for Pyrus		2010	<u>M. Lateur</u> and <u>M. Bergamaschi</u>
3.5	- A Descriptor Task Forces electronic meeting is planned -	<u>Check up and validation of the common work methods</u>		2009	<u>Chairman + TF Leaders</u>
4	4. Finalizing of the standard guidelines and implementation of it for the inclusion of photographs in the Malus and Pyrus databases	Very useful information needed for documentation of the accessions and for first checking of the identity of the accessions held in European collections		2009	Task Force composed of <u>E. Dapena</u> and <u>M. Kellerhals</u> (
5	5. Inclusion of pictures in the DB: two steps				
5.1	- All currently available pictures labelled with their accession number to be sent to DB manager who define clearly the formats			2009-2012	All WG members + DB Managers
5.2	- Standardized pictures will be taken	The aim is to have by the end of Phase VIII, around 30% of accessions documented according to the guidelines		2009-2012	All WG members
6	6. Implementation of case studies of characterization and evaluation descriptors on apple and pear	Stimulate the curators to cooperate together by creating a group synergy and finally to get some data.			
6.1	- Implementation of case studies on the practical utilization of adapted or new descriptors for apple and compilation of the conclusions			2010-2012	<u>E. Dapena</u> and <u>M. Kellerhals</u>
6.2	- Implementation of case studies on the practical utilization of adapted or new descriptors for pear and compilation of the conclusions			2010-2012	<u>M. Lateur</u> ,
6.3	- A common ad hoc meeting is planned for the harmonization of the use of the			2010	

	descriptors				
7	7. Validation of the Pyrus data of 'Synonyms', 'Preferable name', 'Euonyms', 'Country of Historic Origin', 'Bibliographic reference of the cv description' and implementation of the work started during the synonymy <i>ad hoc</i> meeting organized at Gembloux in 2007 and start the work for Malus accessions.	The aim for Pyrus is firstly to validate the work but also to finish the work for at least the most common genotypes present in the DB, for Malus, the aim is to set up the first list of synonyms and start its validation. These information are very useful as first check up of the duplication level of the accessions present in Europe and is a prerequisite for the concept of MAA		2009-2010	<u>DB managers (leaders) and WG members & curators.</u>
7.1	- A common <i>ad hoc</i> meeting is planned for the validation of the Pyrus and the Malus data.			2010	
8	8. Defining and publishing common guidelines for the <i>in situ</i> and on-farm conservation of Malus/Pyrus (in collaboration with the Prunus and Vitis WG's)	Develop the complementary strategies of durable conservation of FGR by combining <i>ex situ</i> and on farm conservation actions		2010	Sub-task group: <u>S. Mader and V. Hanke + WG Chairman</u>
9	9. Follow an ECPGR practical strategies aiming to achieve a safe duplication of the unique material by sharing responsibilities by implementation of the AEGIS concept and a "Pan European Sub-regional Networks" concept.	Start the concept of AEGIS and propose to initiate a complementary approach of 'Sub-regional' networks of collaboration' between complementary collections.		2009-2012	Chairman, DB Managers, WG members, National Coordinators and local Curators
10	10. Continuing the work on public awareness and the link with other networks like 'COST actions' and the scientific community e.g. Eucarpia Fruit Section	Synergy between stakeholders		2009-2012	Chairman and TF leaders
11	11. Stimulate the actions of the different TF : (1) "European Pomology Bibliography TF"; (2) "Traditional Knowledge TF"; (3) "Descriptors TF"; (4) "Malus and Pyrus species TF"	Continuing the actions and implementation of the work plan by sharing the work		2009-2013	TF Leaders + Chairman