

ECPGR Working Group / Task Force / Thematic Network

Progress report for the period June 2006 – June 2008

Malus/Pyrus Working Group

I. RESULTS			
a. Comparison of workplan (milestones) versus results obtained			
Workplan (milestones)	Which results have been obtained?	Which aims/goals have not been (fully) reached?	Completeness ratio (%)
<p>Milestone 1 Organize the next <i>Malus/Pyrus</i> WG meeting in Georgia and make the link with wild relatives experts.</p>	<p>The meeting has been organized on 25-27 October 2006, 25 participants were actively present. Most important results are: EURISCO descriptors have been agreed and prioritized by the partners and specific crop descriptors have been added (15 plus 4); the country or origin descriptor has been completed by 'Country of Historic origin'; descriptors lists have been analyzed and two supplement descriptors are added; Six Task Forces have been set up (+ TF Leaders) as new work strategies for a better implementation of the WP and defined a Crop Expertise Table very practice for pointing out who have the specific expertises; WG adopted the principle of the harmonization of the different fruit DB's; strategies for complementary <i>ex situ</i> and on farm conservation have been discussed; National Collection concept has been discussed and the WG decided to promote in parallel, different approaches concerning sharing responsibilities e.g. AEGIS concept and promoting closer regional collaborations in order to aimed a safe duplication of the unique material – specific AEGIS descriptors have also been adopted; several presentations were focused on the utility of molecular markers as complementary tool for the identification of the unique accessions and the WG stressed the idea of defining harmonized methods and common markers (Fingerprinting ad hoc Meeting); The AGRI GEN RES project submitted commonly by the <i>Malus/Pyrus</i> and <i>Prunus</i> WG's has been discussed but later on we were awarded that it has not been selected; the WG decided to set up a TF devoted to wild sp and finally a new Workplan was adopted.</p>	<p>The second draft report in already available on the ECPGR site but not yet the final version.</p>	<p>85 %</p>

<p>Milestone 2 Present posters on ECPGR <i>Malus/Pyrus</i> Working Group at, e.g., Eucarpia Fruit Section Meeting.</p>	<p>A poster and an abstract presenting the activities of the WG and the DB's have been presented during this very important EUCARPIA Fruit Genetics and Breeding Symposium of Zaragoza (Sept 2007) mentioning as co-authors, all TF's leaders.</p>		<p>100%</p>
<p>Milestone 3 All Working Group members to contact national focal points and encourage provision of passport data from all collections in their country.</p>	<p>For <i>Pyrus</i> CCDB, an update of the data occurred in February 2007, a positive answer came from 25 % of the 28 curators contacted. On the 10.300 accessions encoded only data concerning 'Institution', 'Accession number', 'Genus', 'Spp.', 'Accession Name', 'Location' are available; 14% of the accessions are linked to a 'Collecting date' and a 'Donor Institute'.</p>	<p>No update could be organized for the <i>Malus</i> DB</p>	<p>20%</p>
<p>Milestone 4 Marker workshop (with <i>Malus/Pyrus</i> and <i>Vitis</i> people) at East Malling.</p>	<p>During 7-8 September, EMR organized an Ad hoc Meeting concerning the harmonization of the use of SSR's and on common reference cvs for <i>Malus</i> & <i>Pyrus</i>: for both species, 12 SSR's have been selected and validated (<i>Pyrus</i>) and reference cvs are defined too. Two posters were presented on the EUCARPIA Fruit Genetics and Breeding Symposium of Zaragoza (Sept 2007)</p>	<p>Validation procedures for some markers are still needed for <i>Malus</i></p>	<p>85%</p>
<p>Milestone 5 Workshop on synonymy of <i>Prunus</i> (and <i>Malus/Pyrus</i> and <i>Vitis</i>) organized at Gembloux</p>	<p>The meeting organized at Gembloux on 23-25 June 2008 onwards has booked several milestones: (1) The synonym issue is one of the first key helpful for sorting out original accessions from the DB's, (2) Based on practical examples, a methodology for building up synonym catalogs has been defined, (3) Traceability (bibliographic references) of the information encoded in the DB's is essential; (4) the "SynoPyrus" software developed by CRA-W is a very useful tool that will be shared to all fruit DB managers; (4) Priority strategy need to be developed in regards with the tremendous numbers of synonyms names; (5) Validation procedures are also essential for this work.</p>	<p>The work need to start on apple and will be further developed on cherry and pear</p>	<p>35%</p>
<p>Milestone 6 Identification of pear and apple "euonyms"</p>	<p>During the meeting 1400 pear accessions representing 3100 pear synonyms names have been examined and validated for both their 'Historic origin', 'Preferable names', 'Euonym', bibliographic references have been added and the not common used synonyms names have been pointed out. General methodology was discussed on the work plan that needs to be adopted on the <i>Malus</i> DB.</p>	<p>13,6 % of the most often accessions names present in the database have been examined and will be submitted to the curators for final validation</p>	<p>5% of the 30,000 accession names present in the <i>Malus</i> & <i>Pyrus</i> DB's.</p>

Milestone 7 Definition of standard guidelines for including photographs in database.	The last version of this guidelines was finalized during the 23-25 June ad hoc meeting and CH will send us this last finalized version for final validation		95%
Milestone 8 Workshop on <i>in situ</i> and on farm conservation of <i>Malus/Pyrus</i> (and <i>Prunus</i> and <i>Vitis</i>)	The Workshop is planned to be organized in Germany during the last months of 2008.		5%
Milestone 9 Informal meeting of Working Group at Eucarpia meeting Zaragoza	An informal meeting has been organized with the presence of 10 participants where 3 topics were on the agenda : (1) Common set of SSR's for <i>Pyrus</i> and <i>Malus</i> – Kate Evans presented the conclusions of the EMR ad hoc meeting and the bottlenecks of the procedure of validation for <i>Malus</i> markers; (2) Guidelines for fruit photographs and finally, (3) the delay in the proposed work plan.	Minutes of the meeting was asked to Kate Evans but due to troubles at EMR, the report is not yet finished.	90%
Milestone 10 Harmonization of the <i>Pyrus</i> and the <i>Malus</i> ECCDB's in accordance with the Cherry DB structure. The first step will be to organize a <i>ad hoc</i> meeting with all fruit DB managers and the WG Chair.	During the meeting organized at Gembloux on 23-25 June 2008 onwards, an ad hoc meeting for fruit DB managers was also organized, it has been decided to work closely and to share the tools that have been already developed by the different DB's. The 'SynoPyrus' software and the encoding module will be shared to the 4 DB' teams, the query softwares and the downloads data modules will also be harmonized with also the introduction of the standardized ERURISCO descriptors. The different access levels of the DB's will be the common rule for each DB and the <i>Vitis</i> module for encoding markers data will be the common standard and finally, the principle of validation of the data before their introduction in the DB and the traceability of them are priority principles that have been pointed out. Such meetings are really useful for sharing experiences and for the harmonization of the DB's tools.	A second ad hoc meeting of the fruit DB's managers needs to be planned.	40%
b. Contribution to the four ECP/GR priorities for Phase VII			
1. Characterization/evaluation (including modern technologies) A second draft edition of the priority descriptors for apple has been prepared and circulated for validation, the <i>Pyrus</i> ones are still in preparation and need to be ready by the end of the summer 2008 for circulation and validation. The last version of the guidelines for fruit photographs is in its last phase of redaction and will be circulated during summer 2008 (see Milestone 7). Concerning the use of molecular tools for the identification of the accessions (see milestones 4), this topic was extensively developed during the last WG meeting, a specific ad hoc meeting was organized and reports are finished and need to be circulated.			

<p>2. Task sharing The last Malus/Pyrus WG meeting, the ad hoc Malus/Pyrus Molecular Markers meeting and the Fruit DB Managers and Synonyms meetings were real practical opportunities for sharing experiences and tasks.</p>
<p>3. <i>In situ</i>/on-farm conservation and development This topic was also tackled during our last WG meeting with the strong recommendation to carefully coordinate the work at all levels and the need of an inseparable link between <i>ex situ</i> and 'on farm' conservation strategies.</p>
<p>4. Documentation and information See Milestone 10</p>
<p>c. Relevance (regional / international) Did your work and/or outputs have inter-regional dimension? (if it did, give precisions) The Working Group meetings are the most important stimulation for developing the practical network work. Bilateral and multilateral sub-regional active collaborations between collections having common denominators is a very efficient tool for exchanging experiences and expertise but also for sharing responsibilities and last but not least, for the stimulation of the motivation of the teams. It works really as a very positive synergy between all members of the team involving the technicians and field workers. The ad hoc meetings are also very efficient with the necessity of a good feedback to all members of the WG for their practical implication in the movement and the validation of the technical proposals coming out of the ad hoc meetings.</p>
<p>d. Lessons learnt (recommendations) Which lessons learnt are also relevant for other Working Groups? More frequent international meetings are needed in order to improve the benefits of international cooperation of the participants of the Group. The sharing of the tasks by the setting up of Task Forces with a well defined planning and leaders seems a valuable tool. NCG meetings, CCDM Managers meetings and ad hoc meeting are real complementary to the WG work.</p>

II. ANALYSIS	
a. Bottlenecks	
What were the experienced bottlenecks?	How do you plan to solve the bottlenecks?
The activities of the group between two WG meetings slow down periodically.	Organizing ad hoc meetings was a good strategy in accordance with the available budget; the setting up of Task Forces with nominated leaders is another strategy that is now in his preliminary phase; there is a need for at least one WG meeting each 2 years.
b. Internal support needed (Secretariat, Steering Committee, other Working Groups, etc.)	
<u>Very excellent support was received from the Secretariat, the paper documents are still needed for some key information. The Fruit NCG & the ad hoc Fruit DB's Managers meetings are really needed</u>	
c. External resources needed (collaboration, external funding)	
If possible, European projects or INTERREG projects are really welcome.	

a. Planned activities for PHASE VIII	Carried out by	b. Expected results
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		
<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. - 3 ad hoc Fruit Database Managers meeting is planned for planning this work and also with the view to share the experiences and capacities 	New <i>Malus</i> DB manager in collaboration with the other fruit DB Managers	Harmonization of this management tool and sharing works and tools between the DB's managers
<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. 	Database Managers	Update the database; prepare the work for the next step of sharing the responsibilities.
<ul style="list-style-type: none"> - 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 	Chairman + Descriptors task forces	Harmonization of the work
<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 collections in their country 	All WG members	Stimulate the work up to the local curators
<ul style="list-style-type: none"> - 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 	All WG members	Updating the DB's
<p>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.</p>	<i>Malus/Pyrus</i> : <u>Kate Evans</u> , <u>B. Gelvonauskis</u> , <u>F. Laurens</u> / <u>L. Feugey</u> .	<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>
<p>3. Update and improvement of characterization and evaluation descriptors for <i>Malus</i> and <i>Pyrus</i> and their inclusion in the DBs</p>		
<ul style="list-style-type: none"> - 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 	Task Force: <u>M. Kellerhals</u> (leader) + <u>all WG members</u>	Harmonization of common tools for <i>Malus</i>
<ul style="list-style-type: none"> - 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 	<u>M. Kellerhals</u> and <u>M. Lateur</u> + <u>all WG members</u>	Harmonization of common tools for <i>Malus</i>
<ul style="list-style-type: none"> - Compile all descriptors lists already developed for <i>Pyrus</i> and propose reasonable adjustments 	Task Force: <u>M. Lateur</u> and <u>M. Bergamaschi</u> (leaders),	Harmonization of common tools for <i>Pyrus</i>
<ul style="list-style-type: none"> - 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 	<u>M. Lateur</u> and <u>M. Bergamaschi</u>	Harmonization of common tools for <i>Pyrus</i>
<ul style="list-style-type: none"> - A Descriptor Task Forces electronic meeting is planned during the 2009 year 	<u>Chairman</u> + <u>TF Leaders</u>	<u>Check up and validation of the common work methods</u>

4. Finalizing of the standard guidelines and implementation of it for the inclusion of photographs in the <i>Malus</i> and <i>Pyrus</i> databases	Task Force composed of <u>E. Dapena</u> and <u>M. Kellerhals</u> (Very useful information needed for documentation of the accessions and for first checking of the identity of the accessions held in European collections
5. Inclusion of pictures in the DB: two steps		
- All currently available pictures labelled with their accession number to be sent to DB manager who define clearly the formats	All WG members + DB Managers	
- Standardized pictures will be taken	All WG members	The aim is to have by the end of Phase VIII, around 30% of accessions documented according to the guidelines
6. Implementation of case studies of characterization and evaluation descriptors on apple and pear		<u>Stimulate the curators to cooperate together by creating a group synergy and finally to get some data.</u>
- Implementation of case studies on the practical utilization of adapted or new descriptors for apple and compilation of the conclusions	<u>E. Dapena</u> and <u>M. Kellerhals</u>	
- Implementation of case studies on the practical utilization of adapted or new descriptors for pear and compilation of the conclusions	<u>M. Lateur</u> ,	
- A common ad hoc meeting is planned for the harmonization of the use of the descriptors		
7. Validation of the <i>Pyrus</i> 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 <i>Malus</i> accessions.	<u>DB managers</u> (leaders) and WG members & curators.	<u>The aim for <i>Pyrus</i> is firstly to validate the work but also to finish the work for at least the most common genotypes present in the DB, for <i>Malus</i>, 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</u>
- A common ad hoc meeting is planned for the validation of the <i>Pyrus</i> and the <i>Malus</i> data.		
8. Defining and publishing common guidelines for the <i>in situ</i> and on-farm conservation of <i>Malus/Pyrus</i> (in collaboration with the <i>Prunus</i> and <i>Vitis</i> WG’s)	Sub-task group: <u>S. Mader</u> and <u>V. Hanke</u> + WG <u>Chairman</u>	Develop the complementary strategies of durable conservation of FGR by combining ex situ and on farm conservation actions
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.	Chairman, DB Managers, WG members, National Coordinators and local Curators	Start the concept of AEGIS and propose to initiate a complementary approach of ‘Sub-regional’ networks of collaboration’ between complementary collections.
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	Chairman and TF leaders	Synergy between stakeholders
11. Stimulate the actions of the different TF : (1) “European Pomology Bibliography TF”; (2) “Traditional Knowledge TF”; (3) “Descriptors TF”; (4) “<i>Malus</i> and <i>Pyrus</i> species TF”	TF Leaders + Chairman	Continuing the actions and implementation of the work plan by sharing the work