



Coordinating global research for wheat

<b>CALENDAR YEAR COVERED BY THE ANNUAL REPORT:</b>	2016
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### Wheat Phenotyping to Support Wheat Improvement

#### LEADERSHIP & AUTHORSHIP

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#### EWG LIFE SPAN

<b>Start (launch of call for experts): 2014</b>	<b>End: 2018</b>	
<b># MEMBERS (total)</b>	<b># MEMBERS from industry</b>	<b># COUNTRIES represented</b>
56	5	22

#### AIMS OF THE EWG

- Strengthen and support wheat phenomics research
- Promote international collaborations and the exchange of expertise in wheat phenotyping
- Enhance the integration of wheat phenotyping into breeding and genomics programs
- Engage experts from non-plant disciplines in wheat phenotyping (e.g. computer vision, software engineering)

#### STRATEGIC RESEARCH AGENDA CORE-THEME(S ) /TOPIC(S) COVERED BY THE EWG

As a cross-cutting theme (5 – Enabling Technologies and Shared Resources) – Phenotyping is relevant to most core themes and priorities

## 2016 ACTIVITY REPORT

MEETINGS HELD				
Face-to-Face Meetings	Location	Date	Duration	# EWG members attending
	Texcoco, Mexico	16/12/2016	1d	16
	Frankfurt (Jamboree and Wheat Conference)	12-14/12/2016	2 ½ d	6
	Various informal meetings amongst members at international conferences			

PROGRESS AGAINST AIMS				
Objectives identified for 2016 in the global EWG Action Plan (with objective #)	Tasks/actions undertaken by the EWG (with task #)	Achievements	Outputs/Deliverables	Comments
Outreach and Training (1)	In-house training (2)	<p>Selected examples:</p> <p>Phenotyping expertise provided to 6 IWYP projects through EWG members at IWYP-Hub, at least 2 projects through EWG at APPF</p> <p>Technical days on high throughput phenotyping – 9&amp;10/05/2016, Gréoux les Bains. 40 people, ARVALIS</p>	Training of Postgrads and ECRs in relevant and appropriate phenotyping approaches	
Community building (2)	Joint members with other EWGs (4)	Joint members for most EWGs have been appointed, only two missing	Direct link to other EWGs and improved communication	During upcoming meetings of other EWGs, joint members will raise phenotyping issues to understand what's needed in each EWG and report back to
	Joint meetings with EWGs (5)	Joint meeting with AWAS EWG in Mexico		

				phenotyping EWG since email/online surveys have very low response rate
	Joint members of EWG and IPPN/national Plant Phenotyping Networks (6)	Direct feedback between IPPN and EWG in both ways (IPPN and EWG meeting held at same location with reports both ways)	Coordination of activities to avoid redundancy	
Dissemination of expertise (3)	Listing of publications and info on WI website (9)	IPPN phenotyping survey was published on WI website	Providing overview of current expertise and gaps	Most phenotyping centers are not crop specific and a survey for wheat only within the WI had a very low response rate. The IPPN survey provides an overview of phenotyping more general. Similarly, a survey of wheat phenotyping projects would double up with the surveys of funded projects done at the individual EWG level (e.g. AWAS or NUE) since those projects include phenotyping in most cases
	Profiles of phenotyping EWG members on WheatVIVO (7)	Several EWG members updated their profile and linked their ORCID number, more to come in 2017	Providing access to phenotyping experts to wheat community	

**2017 PLAN**

<b>MEETINGS PLANNED</b>			
<b>Face-to-Face Meetings</b>	Location	Date	Duration
	Austria	22 April 2017	1 d
	Attendance at other EWG meetings (e.g. NUE, durum, AWAS)		
	Various informal meetings of EWG members at numerous conferences (e.g. IWGS, EMPHASIS, InterDrought, Phenome 2017, etc)		

<b>PLANNED ACTIVITIES</b>			
<b>Objectives identified for 2017 in the global EWG Action Plan (with objectives #)</b>	<b>Tasks/actions to be undertaken by the EWG (with tasks #)</b>	<b>Timeline (e.g. February-March)</b>	<b>Expected Outputs/Deliverables</b>
Outreach and Training (1)	Preparation and organization of ICARDA training workshop jointly with AWAS	January - May	Training of breeders and crop physiologists in phenotyping techniques
	In-house training (2)	ongoing	Training of Postgrad students and ECRs
	Online publication of training material from ICARDA workshop and others as available (3)	June-December	
Community building (2)	Nomination of joint EWG members (breeding methods, agronomy and germplasm use still missing) (4)	January – April	Understanding phenotyping needs of wheat community
	Joint meetings with other EWGs/attendance at other EWG meetings (5)	Ongoing through 2017	(phenotyping will be raised at respective EWG meetings and reported back; joint meetings already lined up: WheatIS presentation at Tulln meeting, Durum to report on phenotyping requirements of core collection, attendance of EWG members at NUE workshop)
Dissemination of expertise (3)	Member profiles on WheatVIVO (7)	January - April	As WheatVIVO goes online, wheat community will have access to expert profiles in phenotyping
	Link on WI to IPPN database (8)	January-February	Access to phenotyping database for wheat researchers

	(email sent to WI office on 6/1)		
	Listing of relevant publications (9) (short list of recent review papers included in Meeting report – 12/2016; others to follow as being published)	ongoing	Increasing awareness in wheat community of latest phenotyping activities