



Coordinating global research for wheat

Control of wheat pathogens and pests EWG

Annual report and action plan

NAME OF EXPERT WORKING GROUP	
Pests and pathogens	

LEADERSHIP & AUTHORSHIP	
Chair	Richard Oliver (Curtin University)
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AIMS OF THE EWG	
To reduce losses to pests and diseases from a current 15-20% global average to 10% by 2023 and to 5% by 2028. We focus on genetic methods to control diseases. We recognise that pesticides and agronomic methods are also critical in pest and disease control, but consider that these issues are best dealt with by the Agronomy EWG.	

STRATEGIC RESEARCH AGENDA CORE-THEME(S) /TOPIC(S) COVERED BY THE EWG*Subtopic 2.1 Controlling wheat diseases and pests;*

1. *Short term goals – (1-2 years)* A global initiative to estimate the impact of major pests and diseases of wheat; A compilation of research projects aimed at alleviating the impact of these diseases and pests using genetic methods and focusing on the availability of data and germplasm; A database of validated markers that are linked to disease and pest resistance loci; a quarantine support project that would use genomics to test large seed samples so as to avoid inadvertently distributing pests and diseases.
2. *Medium terms goals (2-4 years)* A global network of “phenotyping centres” placed in diversity hot spot(s) for each pathogen and pest; testing of elite cultivars from different countries for assessment of resistance under field conditions and thereby defining biosecurity risk areas. A series of species-projects for each priority disease and pest involving phenotyping of wheat mapping resources, followed by genetic mapping and marker validation.
3. *Longer term goals (3-6 years)* functional genomics of the interactions, with the aim of discovering and deploying parasite effectors and proxy phenotyping tests

2017 ACTIVITY REPORT

MEETINGS HELD				
Face-to-Face Meetings	Location	Date	Duration	# EWG members attending
	Minneapolis,	4/11/2016	6 hours	30
Other Meetings	Type (online, etc)	Date	Duration	# EWG members attending

2017 PLAN

MEETINGS PLANNED			
Face-to-Face Meetings	Location	Date	Duration
	Austria	23/4/2017	4 hours
Other Meetings	Type (online, etc)	Date	Duration
	Each disease and pest project will run their own web based meetings	Various	