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Saturday 21 September 2024

The Wheat Initiative Expert Working Group (EWG) Meetings (*Open to pre-registered delegates only*)

Location: Cliftons Meeting Room Solutions, Parmelia House, 191 St George's Terrace, Perth WA 6000

09:00 – 12:30	EWG DURUM WHEAT GENOMICS AND BREEDING
	EWG IMPROVING WHEAT QUALITY FOR PROCESSING AND HEALTH
	EWG WHEAT BREEDING METHODS AND STRATEGIES
	EWG ADAPTATION OF WHEAT TO ABIOTIC STRESS
	EWG NUTRIENT USE EFFICIENCY IN WHEAT
12:30 – 13:30	Lunch
13:30 – 17:00	AHEAD MEETING

Sunday 22 September 2024

07:30 – 18:00	Registration Open	
09:00 – 12:00	Pre-congress Workshops	Various Rooms
09:00 – 12:00	Wheat Initiative Research Committee Meeting (<i>Invitation Only</i>)	
09:00 – 12:00	Wheat Initiative Scientific Board Meeting (<i>Invitation Only</i>)	
09:00 – 12:00	Wheat Initiative Board Meeting (<i>Invitation Only</i>)	
12:00 – 13:00	Lunch	Riverside Foyer
13:00 – 16:30	Pre-congress Workshops	Various Rooms
13:00 – 16:30	Wheat Initiative Combined Meeting (<i>Invitation Only</i>)	
17:00 – 19:00	Inaugural Session	
	Congress welcome Prof Rajeev Varshney , Director, Centre for Crop and Food Innovation and State Agricultural Biotechnology Centre, Murdoch University, Australia	
	Opening remarks Prof. Andrew Deeks , Vice Chancellor & President, Murdoch University, Australia	
	Official opening Hon Darren West MLC , (<i>Representing the Hon. Roger Cook MLA, Premier of Western Australia</i>), Member for Agricultural Region, Western Australia	

	GRDC's perspectives Mr Nigel Hart , Managing Director, Grains Research Development & Corporation (GRDC), Australia
	WA Agriculture perspectives Ms Heather Brayford , Director General Department of Primary Industries and Regional Development (DPIRD), Western Australia
	International wheat research perspectives Dr Bram Govaerts , Director General, CIMMYT, Mexico
	International research collaboration for R&D Prof Wendy Umberger , CEO, Australian Centre for International Agricultural Research (ACIAR), Australia
	Inaugural talk Prof Peter Langridge AM , Chair, Scientific Board, International Wheat Initiative, Germany
	Vote of thanks Ms Anu Chitikineni , Senior Manager, Centre for Crop & Food Innovation, Murdoch University, Australia
19:00 – 21:00	Welcome Reception – Sponsored by the Food Futures Institute <i>Riverside Theatre Foyer, Perth Convention & Exhibition Centre</i>

Monday 23 September 2024

08:30 – 10:30	Plenary Session 1: Advancing wheat genomics: molecular markers to haplotype-resolved genomes and beyond
Co-Chairs:	Prof Rajeev Varshney , <i>Murdoch University, Australia</i> Dr Sarrah Ben M'Barek , <i>Regional Field Crop Research Centre of Beja, Tunisia</i>
08:30 – 08:50	Exploiting natural diversity for wheat breeding Prof Cristobal Uauy , John Innes Centre, UK
08:50 – 09:10	Feed the future: genomic technologies for wheat improvement Prof Curtis Pozniak , University of Saskatchewan, Canada
09:10 – 09:25	De-novo annotation of the wheat pangenome reveals complexity and diversity of the hexaploid wheat pan-transcriptome Dr Thomas Lux , Helmholtz Munich/PGSB, Germany
09:25 – 09:40	The platinum-quality Svevo reference genome assembly: A new tool for advanced plant breeding Prof Luigi Cattivelli , CREA Research Centre for Genomics and Bioinformatics, Italy
09:40 – 09:55	Switches in homoeolog expression bias in hexaploid wheat are associated with cis-variation Dr Philippa Borrill , John Innes Centre, UK
09:55 – 10:10	History of the bread wheat D genome Prof Simon Krattinger , King Abdullah University of Science and Technology, Saudi Arabia
10:10 – 10:25	Wheat spike development and its impact on grain number per spike Dr Jorge Dubcovsky , University of California, USA
10:25 – 10:30	Open
10:30 – 11:00	Morning Tea – Sponsored by Inari
11:00 – 12:30	Plenary Session 2: Exploring wheat's diversity, evolution and genetic reservoirs
Co-Chairs:	Dr Matthew Hayden , <i>Agriculture Victoria Research/ La Trobe University, Australia</i> Dr Parveen Chunneja , <i>Punjab Agricultural University, India</i>
11:00 – 11:20	A walk on wheat's wild side Prof Julie King , University of Nottingham, UK

11:20 – 11:40	Exploring natural variation patterns in agronomic traits using a lineage-based viewpoint in <i>Aegilops tauschii</i> Coss. Dr Yoshihiro Matsuoka , Kobe University, Japan
11:40 – 11:55	Discovering the <i>Aegilops</i> genomes Dr Sylvie Cloutier , Agriculture and Agri-Food Canada, Canada
11:55 – 12:10	Do wild species help to improve the quantitative traits of wheat? Dr Hisashi Tsujimoto , Tottori University, Japan
12:10 – 12:25	Developing the tetraploid wheat pangenome for wheat research and breeding: <i>Triticum turgidum</i> diversity unraveled. Assoc Prof Marco Maccaferri , Università Di Bologna, Italy
12:25 -12:30	Open
12:30 – 13:30	Lunch – Sponsored by Genomics WA
13:30 – 15:00	Plenary Session 3: Innovative and conventional approaches for wheat breeding (Sponsored by The University of Queensland)
Co-Chairs:	Dr Juan Juttner , Grains Research and Development Corporation, Australia Dr Taner Sen , USDA-ARS, USA
13:30 – 13:50	More wheat breeding investment for more wheat breeding impact Dr Haydn Kuchel , Australian Grain Technologies (AGT), Australia
13:50 – 14:10	Better understanding genome diversity for more efficient gene discovery and breeding in wheat Prof Xue Yong Zhang , Chinese Academy of Agricultural Sciences (CAAS), China
14:10 – 14:25	Controlling homologous and homoeologous recombination in bread wheat to enhance development of new wheat varieties Dr Pierre Sourdille , INRAE UMR GDEC Clermont-Ferrand, France
14:25 – 14:40	Optimizing wheat root traits for carbon sequestration: A multidisciplinary approach from controlled environment to field Dr Charlotte Rambla , Salk Institute for Biological Studies, USA
14:40 – 14:55	Comparisons of phenotypic vs genomic selection on yield in US winter wheat from multiple environments Dr Shuyu Liu , Texas A&M University, USA
14:55 – 15:00	Open
15:00 – 15:30	Afternoon Tea – Sponsored by Inari
15:30 – 17:00	Panel Discussion I: Wheat Breeding Organisations
Co-Chairs:	Ms Tress Walmsley , InterGrain Pty Ltd, Australia Dr Darshan Sharma , WA DPIRD, Australia
	Australia Dr Bertus Jacobs , LongReach Plant Breeders Dr Tristan Coram , Australian Grain Technologies Ms Tress Walmsley , InterGrain
	New Zealand Ms Sarah Whiteman , PGG Wrightson Seeds
	China Dr Zhonghu He , CAAS/ CIMMYT
	India Dr Rattan Tiwari , ICAR- Indian Institute of Wheat & Barley Research
	Europe Dr Jacob Lage , KWS Momont Recherche S.A.R.L., France

	UK Dr Chris Burt , RAGT Seeds, UK
	North America Dr Dylan Larkin , Limagrain, USA
	South America Dr Ivana Sabljic , GDM Seeds, Brazil
	General discussion
17:00 – 17:30	<i>Free time</i>
17.30 – 19.00	Poster session along with Sundowner – Sponsored by PacBio & Millenium Sciences

Tuesday 24 September 2024

08:30 – 10:30	Plenary Session 4: Improving abiotic stress tolerance in wheat
Co-Chairs:	Prof Bettina Berger , <i>University of Adelaide, Australia</i> Prof John Spink , <i>Teagasc – The Agriculture and Food Development Authority, Ireland</i>
08:30 – 08:50	Combining complex traits to improve abiotic stress tolerance in wheat Prof Matthew Reynolds , CIMMYT, Mexico
08:50 – 09:10	Fine-tuning floral adaptation in hexaploid bread wheat Dr Laura Dixon , University of Leeds, UK
09:10 – 09:25	Establishing a robust long-term field screening site for the identification of frost tolerance in wheat Dr Brenton Leske , WA Department of Primary Industries and Regional Development, Australia
09:25 – 09:40	Pre- and post-anthesis heat waves impact on yield under field conditions Dr Roxana Savin , University of Lleida – AGROTECNIO-CERCA Center, Spain
09:40 – 09:55	Breeding nutrient-dense, climate resilient and biotic/abiotic stress resistant/tolerant wheat varieties for Western Himalayas of India Dr Rebecca Thistlethwaite , The University of Sydney, Australia
09:55 – 10:10	High-throughput phenomics and multiomics of the pan-wheat cultivars reveal response plasticity to moderate drought stress Dr Angela Juhasz , Edith Cowan University, Australia
10:10 – 10:25	Innovative strategies for advancing wheat genetic improvement utilizing synthetic hexaploid wheat Dr Susanne Dreisigacker , CIMMYT, Mexico
10:25 – 10:30	Open
10:30 – 11:00	Morning Tea – Sponsored by Elders
11:00 – 12:30	Plenary Session 5: Enhancing wheat resistance against biotic stresses
Co-Chairs:	Prof Evans Lagudah , <i>CSIRO Agriculture and Food, Australia</i> Dr Nicole Thompson , <i>South Australian Research & Development Institute, Australia</i>
11:00 – 11:20	Wheat rust resistance genes: R we there yet? Asso Prof Brande Wulff , King Abdullah University of Science and Technology, Saudi Arabia
11:20 – 11:40	Molecular diversity in wheat – fungal pathogen interactions as a basis of novel breeding strategies Prof Beat Keller , University of Zürich, Switzerland
11:40 – 11:55	Dissecting resistance to wheat fungal diseases by leveraging on the wide tetraploid wheat germplasm diversity Dr Elisabetta Mazzucotelli , Council for Agricultural Research and Economics, Italy

11:55 – 12:10	Editing of host susceptibility factor genes increased wheat yellow mosaic virus resistance without yield penalty Prof Ping Yang , Institute of Crop Sciences, Chinese Academy of Agricultural Sciences, China
12:10 – 12:25	Unleashing genetic potential: Battling Fusarium crown rot in Australia Dr Zhi Zheng , CSIRO Agriculture and Food, Australia
12:25 – 12:30	Open
12:30 – 13:30	Lunch – Sponsored by MDPI
13:30 – 15:00	Plenary Session 6: Developing climate-smart wheat in the context of abiotic stresses
Co-Chairs:	Prof Stephen Powles , <i>The University of Western Australia, Australia</i> Prof Richard Trethowan , <i>The University of Sydney, Australia</i>
13:30 – 13:50	Seeds for change: production-oriented wheat research from Australia to the world Prof Alison Bentley , Australian National University, Australia
13:50 – 14:05	Predicting G×E and defining Australian wheat mega-environments using factor analytic mixed models and environmental covariates Dr Nick Fradgley , CSIRO, Australia
14:05 – 14:20	High-throughput image-based phenotyping to predict crop performance in new environments and genotypes in breeding Dr Lukas Roth , ETH Zurich, Switzerland
14:20 – 14:35	Thermally safe flowering window for wheat: Learning from data to inform breeding targets Dr Fernanda Dreccer , CSIRO, Australia
14:35 – 14:50	Dissecting the durum wheat QTLome for drought-adaptive traits Prof Roberto Tuberosa , Università Di Bologna, Italy
14:50 – 15:00	Open
15:00 – 15:30	Afternoon Tea – Sponsored by Elders
15:30 – 17:00	Panel Discussion II: Wheat Production, Research, & Trade in Major Wheat Growing Geographies
Co-Chairs:	Mr Peter Bird , <i>Grains Research & Development Corporation, Australia</i> Dr Sandra Milach , <i>CIMMYT, Mexico</i>
Australia	Ms Courtney Draper , <i>AEGIC, Australia</i> Mr Richard Simonaitis , <i>Grains Australia, Australia</i>
India	Dr Himanshu Pathak , <i>ICAR, India</i>
China	Prof Luxiang Liu , <i>Chinese Academy of Agricultural Sciences CAAS, China</i>
USA	Prof Bikram Gill , <i>Kansas State University, USA</i>
Europe	Dr Frank Ordon , <i>Julius Kuehn Institute, Germany</i>
Africa/ Ethiopia	Dr Negash Gelata Ayana , <i>Ethiopian Institute of Agricultural Research, Ethiopia</i>
South America	Dr Daniel Calderini , <i>Universidad Austral de Chile, Chile</i>
	General discussion
17:00 – 17:30	<i>Free time</i>
17:30 – 19:00	Poster session along with Sundowner

Wednesday 25 September 2024

07:00 – 08:30	IWC Women in Triticum Breakfast Meeting <i>Meeting Room 1</i>
08:30 – 10:30	Plenary Session 7: Ensuring sustainable wheat production through innovations in agronomy, crop management and digital agriculture
Co-Chairs:	Dr Andrew Fletcher , CSIRO, Australia Dr Silvia German , National Agricultural Research Institute, Uruguay
08:30 – 08:50	Success from system synergies: using G x E x M approaches to transform future wheat production Dr John Kirkegaard , CSIRO, Australia
08:50 – 09:10	Retrospects and prospects of the Ethiopian wheat seed industry: Implications to sustainable wheat production Dr Karta Kalsa , TMSR (EIAR), Ethiopia
09:10 – 09:25	Nitrogen management and agronomic performance in winter wheat Dr Gavin Humphreys , Agriculture & Agri-Food Canada, Canada
09:25 – 09:40	Wheat yield progress NW Mexico: A bellwether for lower latitude yields around the world Dr Tony Fischer , RSB ANU, Australia
09:40 – 09:55	Short-season winter wheat: A new strategy to build resilient and diverse cropping systems Dr Amanda De Oliveira Silva , Oklahoma State University, USA
09:55 – 10:10	Interactive effects of eCO ₂ and mycorrhization on plant performance are host-species or cropping pattern dependent Prof Xinhua He , Sichuan Agricultural University, China
10:10 – 10:25	Protein dilution in wheat – future agronomy and reality for Western Australian production systems Dr Dion Nicol , Department of Primary Industries and Regional Development WA, Australia
10:25 – 10:30	Open
10:30 – 11:00	Morning Tea
11:00 – 12:30	Plenary Session 8: Collaboration, social and economic impacts of wheat research
Co-Chairs:	Dr Michael Robertson , CSIRO, Australia Prof Mark Gibberd , CCDM/ Curtin University, Australia
11:00 – 11:20	Managing the Global Risk of Wheat Disease Epidemics: Innovations and Collaborations for Sustainable Wheat Production Prof Marcelis Acevedo , Cornell University, USA
11:20 – 11:35	Harvesting hope: The East African wheat transformation Dr Sridhar Bhavani , CIMMYT, Mexico
11:35 – 11:50	Socio-economic impact of improved wheat varieties at farmers' field in India – An experimental approach Dr Ramadas Sendhil , Pondicherry University, India
11:50 – 12:05	Wheat breeding and scaling in Africa: Challenges and opportunities from ICARDA's perspective Dr Wuletaw Tadesse , ICARDA, Syria
12:05 – 12:20	The CAIGE program – A valuable source of genetic resistance to several wheat diseases Dr Julie Nicol , University of Sydney, Australia
12:20 – 12:30	Open
12:30 – 13:20	Lunch

13:30 – 15:00	Special Session 11: Early Career Researchers presentations
Co-Chairs:	Dr Colin Cavanagh , <i>BASF, Australia</i> Prof Alison Bentley , <i>Australian National University, Australia</i>
13:30 – 13:37	Spike-branching wheat: Hype or hope? Dr Ragavendran Abbai , Leibniz Institute of Plant Genetics and Crop Plant Research, Germany
13:37 – 13:44	Exploring basal spikelet infertility through spatial transcriptomics Mr Maximillian Jones , John Innes Centre, UK
13:44 – 13:51	Unlocking the secrets of female fertility in wheat for improved hybrid seed production Dr Marina Millán Blázquez , Laboratoire Reproduction Et D'evolution Des Plantes (rdp-lyon), France
13:51 – 13:58	Candidate loci and evolutionary insights on yellow rust resistance in an Asian wheat NAM population Ms Katharina Jung , University of Zurich, Switzerland
13:58 – 14:04	Why stabilizing grain proteins can help modern wheat agriculture Dr Hui Cao , The University of Western Australia, Australia
14:04 – 14:11	Beyond the genome: A pan-transcriptome for <i>Aegilops tauschii</i> Dr Samuel Holden , University of British Columbia, Canada
14:11 – 14:18	Unveiling the mechanism of the <i>Sr62</i> wheat tandem kinase Dr Renjie Chen , King Abdullah University of Science and Technology, Saudi Arabia
14:18 – 14:25	Overcoming genotypic dependency and bypassing immature embryo in wheat transformation by using morphogenic regulators Ms Ziru Zhou , Huazhong Agricultural University, China
14:25 – 14:32	Integrating uas phenomic data into the Texas A&M winter wheat breeding program Ms Shannon Baker , Texas A&M Agrilife Research, USA
14:32 – 14:39	Unravelling the genetic basis of heat tolerance in wheat Mr Rakshith Gowda , Murdoch University, Australia
14:39 – 14:46	Gene editing of upstream open reading frames to investigate novel iron biofortification strategies in wheat Mr Oscar Carey-Fung , The University of Melbourne, Australia
14:46 – 14:55	Temperature and photoperiod interaction: Releasing aerial branching in wheat Ms Isabel Faci , John Innes Centre, UK
14:55 – 15:00	Open
15:00 – 16:00	Poster Session
16:00 – 17:30	ECR & Student Career Pathways Panel and Networking Social Event
17:30 – 19:00	Free Time
19:00 – 23:00	Congress Dinner – Sponsored by Australian Genome Research Facility (AGRF) <i>Perth Convention and Exhibition Centre</i>

Thursday 26 September 2024

08:30 – 10:30	Plenary Session 9: Wheat quality, end-use processing and value addition for human health and nutrition
Co-Chairs:	Dr Dion Bennett , <i>Australian Grain Technologies, Australia</i> Dr David Tabah , <i>InterGrain Pty Ltd, Australia</i>
08:30 – 08:50	Breakthroughs in International Wheat Quality Research: Success Stories from the EWG on Improving Wheat Quality for Enhancing Wheat for Processing and Health Prof Carlos Guzman , University of Córdoba, Spain
08:50 – 09:10	Black wheat: Biofortification to public health intervention Dr Monika Garg , National Agri-Biotechnology Institute, India
09:10 – 09:25	Amylose content of wheat flour noodles effects postprandial satiety and glycaemic response in healthy adults Dr Wendy Hunt , Murdoch University, Australia
09:25 – 09:40	Genetic variation for mineral uptake and partitioning in the Watkins germplasm collection Prof Malcolm Hawkesford , Rothamsted Research, UK
09:40 – 09:55	Increasing micronutrient retention and bioavailability through processing and genetic improvement Dr Maria Itria Ibba , International Maize and Wheat Improvement Center, Mexico
09:55 – 10:10	Understanding starch granule formation in wheat for improved nutritional and functional quality Dr David Seung , John Innes Centre, UK
10:10 – 10:25	Health-promoting and technological properties of novel durum wheat materials and derived foods Dr Barbara Laddomada , ISPA CNR, Italy
10:25 – 10:30	Open
10:30 – 11:00	Morning Tea
11:00 – 12:30	Plenary Session 10: New horizons for advancing wheat research (Sponsored by The University of Queensland)
Co-Chairs:	Prof Ian Small , <i>The University of Western Australia, Australia</i> Dr Mao Long , <i>Chinese Academy of Agricultural Science, China</i>
11:00 – 11:20	Bridging Continents: Collaborative Innovations in Genome Editing for Wheat Breeding in Australia Dr Melissa Garcia , INARI, USA
11:20 – 11:35	A phase-separated protein hub modulates resistance to <i>Fusarium</i> head blight in wheat Prof Gang Li , Nanjing Agricultural University, China
11:35 – 11:50	The application of short-read and long-read RNA sequencing and high-resolution phenotyping to analyse wheat-pathogen interactions Dr Fatima Naim , Curtin University, Australia
11:50 – 12:05	Source-sink relationships in the context of wheat yield improvement Prof Tsu-Wei Chen , Humboldt Universität zu Berlin, Germany
12:05 – 12:20	Faststack: An AI-guided breeding for wheat genetic improvement Dr Eric Dinglasan , Queensland Alliance for Agriculture and Food Innovation – The University of Queensland, Australia
12:20 – 12:30	Discussion
12:30 – 13:30	Lunch & Poster Displays

13:30 – 15:00	Panel Discussion III: Capacity Building/ Inspiring next generation Scientists
Co-Chairs:	Prof Kadambot Siddique , <i>The University of Western Australia, Australia</i> Prof Hirokazu Handa , <i>Kyoto Prefectural University, Japan</i>
Crawford Fund	Adj Prof Cathy Reade , Director of Outreach and NextGen Program, The Crawford Fund, Australia
APAARI, Asia	Dr Ravi Khetrpal , Executive Director, Asia Pacific Association of Agricultural Research Institutions (APAARI), Thailand
WACCI, Africa	Prof Eric Danquah , Founding Director WACCI, Ghana
CIMMYT, Malawi	Dr Veronica Guwela , Wheat Wide Crossing Scientist, CIMMYT, Malawi
IAEA	Dr Pooja Mathur , Head, FAO- IAEA International Atomic Energy Agency (IAEA) , Austria
Wheat Initiative	Ms Teresa Saavedra-Bravo , Program Manager, Wheat Initiative, Germany
	Discussion
15:00 – 15:30	Afternoon Tea
15:30 – 17:00	Closing Ceremony
	Wrap-up Prof Rajeev Varshney Director, Centre for Crop and Food Innovation and State Agricultural Biotechnology Centre, Murdoch University, Australia
	Presentation of Awards
	Brief highlights/ summary of 3rd IWC Prof Bob McIntosh Emeritus Professor, The University of Sydney, Australia
	Closing remarks from WA Ms Cecilia McConnell DDG- Research, Department of Primary Industries and Regional Development, Western Australia
	Next steps Prof Peter Langridge Chair, Scientific Board, International Wheat Initiative, Germany
	Next IWC Prof Roberto Tuberosa IWC 2026 Organiser, Università Di Bologna, Italy
	Closing remarks for the Congress Prof Peter Davies Pro Vice Chancellor, Food Futures Institute, Murdoch University, Australia
	Vote of thanks Ms Anu Chitikineni Senior Science Manager, Centre for Crop & Food Innovation, Murdoch University, Australia

Friday 27 September 2024

07.30 – 16.30	AGT and LongReach Field Trip
08.00 – 12.00	CBH Tour
09.00 – 15.30	Intergrain Field Trip