

20th AUSTRALIAN BARLEY TECHNICAL SYMPOSIUM



AUSTRALIAN
BARLEY
TECHNICAL
SYMPOSIUM
INC.

22nd – 25th August 2022
Gold Coast – Queensland
QT Gold Coast

QUALITY AUSTRALIAN BARLEY: DRIVING OPPORTUNITIES AND VALUE

Program

Sunday 21 st August 2022		
08.00 am-O/N	Pre- Symposium Field Trip: Darling Downs – Scenic Rim	
Monday 22 nd August 2022		
O/N-4.00pm	Pre- Symposium Field Trip continues	
6.00-7.00pm	Student & Newcomers Forum with Industry Leaders	
7.00-9.00pm	Welcome Reception	Sponsored by SeedForce QT Poolside
Tuesday 23 rd August 2022		
8.15-9.00am	Acknowledgement of Country	Joel Gilmore
	Opening of Symposium	Mark Dieters
	Grains Australia Update	Terry Enright
	GRDC Update	Peter Carberry
9.00-10.30am	Session 1: Adding Value – Improving Flavour	Sponsored by BBM Session Chairs: Paul Rigoni/Simon Leach
9.00-9.30am	KEYNOTE: Breeding for barley variety flavour	Pat Hayes
9.30-10.00am	KEYNOTE: Craft malting in the USA: reviving an old craft in the 21 st century	Jesse Bussard
10.00-10.15am	Differences in flavour of malt from different barley varieties and growing regions	Sue Stewart
10.15-10.30am	Panel discussion and question time	
10.30-11.00am	Morning Tea	Sponsored by AGT
11.00-12.30pm	Session 2: Adding Value – Malting and Brewing	Sponsored by Asahi Beverages Session Chairs: Mark Goldsmith /Jeff Stewart
11.00-11.30am	KEYNOTE: Malt for craft brewers. Separating wants from needs	Doug Stewart
11.30-11.45am	ZoomBarley Varietal Identification 2.0	Nicolas Martelli

11.45-12.00pm	Proteomics reveals commitment to germination in barley seeds is marked by loss of stress response proteins	Edward Kerr
12.00-12.15pm	Adapting hop production to target craft brewers	Simon Whittock
12.15-12.25pm	Asahi Beverages Update	Ebony Arabella
12.25-12.40pm	Panel discussion and question time	
12.40-1.40pm	Lunch & Poster	Sponsored by Lion
1.40-5.30pm	Session 3: Achieving a Sustainable Barley Industry	Sponsored by Bayer Session Chairs: David Moody/Mary Raynes
1.40-2.10pm	KEYNOTE: Sustainability, who leads, who pays? A consumer driven take on barley and sustainability	Anne Stephens
2.10-2.25pm	Transparent Frameworks: a road map to sustainability	Michael Clancy
2.25-2.50pm	Can craft become sustainable	Glen Fox
2.50-3.05pm	Contribution of malt to the process of a carbon neutral beer	Amy Dennis
3.05-3.20pm	Panel discussion and Question time	
3.20-3.40pm	Afternoon Tea	Sponsored by Bayer
3.40-3.50pm	Bayer Update	Richard Jackman
3.50 -4.10pm	The economics of sustainability compliance	Andy Barr
4.10-4.30pm	The value of agrichemicals in a sustainable farming system	Andrew Weidemann
4.30-4.50pm	Zero-carbon emissions target for all growers	Simon Wallwork
4.50-5.30pm	Panel discussion and question time	
5.45-9.00pm	Networking Function	Offsite
Wednesday 24th August 2022		
8.30-10.30am	Session 4: Marketing Quality Australian Barley	Sponsored by AEGIC Session Chairs: Jack King/Megan Sheehy
8.30-9.00 am	KEYNOTE: Markets for Australian barley beyond 2025	Mary Raynes
9.00-9.30am	KEYNOTE: Our Humble Barley	John Stuart
9.30-9.45am	A supply chain digital twin system to improve the performance and efficiency of the Australian grain supply chain	Julius Kotir
9.45-10.15am	Strategic Plan for the Barley Industry	Drew Robertson
10.15-10.30am	Panel discussion and question time	
10.30-11.00am	Morning Tea	Sponsored by BASF
11.00-12.15pm	Session 5: Agronomy and Farming Systems	Sponsored by GRDC Session Chairs: Jon Thelander/Stewart Coventry

11.00-11.15pm	Global synergies in crop development, agronomy and genetics to improve barley productivity	Kenton Porker
11.15-11.30pm	Why Barley is a very good fit in our farming system	Rob Long
11.30-11.45pm	Tweaking agronomy for our malt barley varieties in northern NSW	Matt Gardner
11.45-12.00pm	Agronomic management techniques for reducing barley head loss in Southern Australia	Melissa McCallum
12.00-12.30pm	Panel discussion and question time	
12.30-1.30pm	Lunch	Sponsored by Seednet
1.30-2.15pm	Session 6: Resistance & Elevator Pitches	Session Chairs: Laura Ziems / Ben Schulz
1.30-1.34pm	Pre-season soil/crop residue testing can identify barley crops at risk of spot form of net blotch infection	Mark McLean
1.34-1.38pm	Quantitative proteomics of the malt barley proteome: Understanding the impact of genetic variation on water uptake	Clare O’Lone
1.38-1.42pm	Identification of QTL for the number of vascular bundles in barley stem	Yanan Niu
1.42-1.46pm	QTL mapping of barley lodging resistance	Tianxiao Chen
1.46-1.50pm	Delving into the genetic architecture of early vigour in Australian barley	Samir Alahmad
1.50-1.54pm	Investigating DNA methylation changes due to crop breeding techniques in barley	Judith Eglitis
1.54-1.58pm	Protein identifications from hordein-reduced barley and malt	Mahya Bahmani
1.58-2.02pm	Utilising novel genetic diversity to increase barley yields nationally	Anh Tung Pham
2.02-2.06pm	Investigating different genomic prediction models in commercial barley breeding programs	Shiva Azizinia
2.06-2.10pm	Nested association mapping to dissect the genetic architecture of spot blotch resistance in barley	Dipika Roy
2.10-2.14pm	Searching sources of germplasm with multiple disease resistance against barley foliar diseases	Sanjiv Gupta
2.14 – 2.20pm	SeedForce Update	David Leah
2.20-3.00pm	Afternoon Tea & Poster Session	
3.00-5.15pm	Session 7: New Opportunities	Sponsored by Coopers Session Chairs: Doug Stewart/Glen Fox
3.00-3.30pm	KEYNOTE: Leveraging the barley pan-genome for disease resistance gene discovery	Matthew Moscou
3.30-4.00pm	KEYNOTE: CRISPR beer: gene editing and the barleys of the future	Ian Godwin
4.00-4.15pm	Genetic approaches to induce novel variation in barley for the control of grain development	Matthew Tucker
4.15-4.30pm	Whisky is better with chips and pretzels	Gabriel Keeble-Gagnere
4.30 -5.00pm	KEYNOTE: Development of green (unkilned) barley malt as a brewing raw material	David Cook
5.00-5.15pm	Panel discussion and question time	
5.15-6.15pm	ABTS Inc Annual General Meeting	

	Free Evening	
Thursday 25th August 2022		
8.30-10.00am	Session 8: Biotic Stress Tolerance/Resistance	Session Chairs: Lisle Snyman/Mark Dieters
8.30-9.00am	KEYNOTE: Key barley diseases and their impacts on quality	Ruth Dill-Macky
9.00-9.15am	Fungicide resistance in the barley foliar pathogen <i>Pyrenophora teres f.teres</i> in the southern growing region of Australia	Tara Garrard
9.15-9.30am	Is fungicide management of spot-form net blotch economic in the low rainfall regions of Western Australia?	Andrea Hills
9.30-9.45am	Pairing classical techniques and statistical genetics to characterise rust resistance genes	Laura Ziems
9.45-10.00am	Mapping of quantitative <i>trait loci</i> in barley associated with resistance to the stripe rust pathogen <i>Puccinia striiformis f. sp. Hordei</i>	Davinder Singh
10.00-10.15am	Panel discussion and question time	
10.15-10.40am	Morning Tea	Sponsored by EPG Seeds
10.40-12.00pm	Session 9: Abiotic Stress Tolerance	Session Chairs: Stewart Coventry/Lisle Snyman
10.40-11.10am	New strategies of the ICARDA Global Barley Breeding Program to breed barley for the Developing World	Miguel Sanchez-Garcia
11.10-11.25am	How to beat the heat: New genetics for breeding fertile and heat-tolerant barley	Camilla Hill
11.25-11.40am	Digging deeper to improve yield stability: harnessing roots using new breeding technologies	Lee Hickey
11.40-11.55am	Proteome responses in barley during short periods of heat stress applied in early grain fill	Catherine Lawn
11.55-12.10pm	Finding the links between stomata and plant acid soil (Al toxicity) tolerance	Chenchen Zhao
12.10-12.25pm	Panel discussion and question time	
12.25-1.15pm	Lunch	Sponsored by Barrett Burston Malting
1.15-3.40pm	Session 10: Genetics & Breeding	Sponsored by InterGrain Session Chairs: Tress Walmsley/ Paul Telfer
1.15-1.45pm	KEYNOTE: Genomic signatures of Australian barley breeding history	Chengdao Li
1.45-2.00pm	Fun and challenges in barley breeding: complex crosses	David Moody
2.00-2.15pm	Using artificial intelligence algorithm to rapidly improve multiple disease resistance in barley	Eric Dinglasan
2.15-2.30pm	Can vegetative indices from high-throughput phenotyping be used to improve grain yield prediction accuracy for genomic selection in barley?	Silvina Baraibar
2.30-2.45pm	Exploring the Genetic Potential to Develop Barley Cultivars with Long Coleoptiles	Hannah Robinson
2.45-3.00pm	Genome editing to create barley with designer roots	Zachary Aldiss
3.00-3.15pm	Barley with tolerance to group 1 herbicides - A weed management tool	Tristan Coram
3.15-3.25pm	InterGrain update	Tress Walmsley

3.25-3.40pm	Panel discussion and question time
3.40-4.00pm	Afternoon Tea Sponsored by ADAMA
4.00-5.15pm	Session 11: Barley a Versatile Crop - Food, Feed and Fodder Session Chairs: John Stuart/Mark Lewis
4.00-4.15pm	Impacts of starch and fibre quality on human/animal nutrition Mike Gidley
4.15-4.45pm	Barley and Aquaculture: Beer, bugs and sustainability Megan Edwards
4.45-5.00pm	Panel discussion and question time
5.00-5.15pm	Symposium close Mark Dieters
7.00-11.00pm	ABTS Symposium Dinner Sponsored by Coopers