



Plants in a Changing Environment

4-6th July 2017, Massey University, Palmerston North, New Zealand

Tuesday 4th July		
9.45 – 10.20 am	Registration/morning tea in foyer	
10.20 – 10.50 am	Whakatau/Maori welcome and Opening Address	Hone Morris/Peter Kemp
Session 1	Digital horticulture	Chair: Jason Johnston
10.50 – 11.35 am	Keynote Agrifood Informatics – It is not all about data analytics	Tristan Perez
11.35 – 11.50 am	Assessing quality of horticultural products using a low-cost consumer scale near infrared (NIR) device	Li Mo
11.50– 12.10	Exploring the potential for digitization of plant phenotypic traits to improve and accelerate research outputs in the breeding area	Peter McAtee
12.10 – 12.30 pm	Compac and the changing packhouse environment	Perry Sansom
12.30 – 1.10 pm	Lunch	
1.10 – 1.30 pm	Why is predicting kiwifruit quality in the cool chain so difficult?	Andrew East
1.30 – 1.45 pm	Towards in silico analysis of transgenic studies: the case of regulation of apple (<i>Malus × domestica</i>) fruit softening	Sunny George Gwanpua
Session 2	Plants and the environment	Chair: Marian McKenzie
1.45 – 2.30 pm	NZSPB Roger Slack Award in Plant Biology From mutants to molecules, a trip through plant development and hormone signaling	Kim Snowden
2.30 – 2.45 pm	Betacyanin production associated with altered sodium distribution in the New Zealand ice plant, <i>Disphyma australe</i>	Tanja Karl
2.45 – 3.00 pm	Yellow canopy syndrome in sugarcane: occurrence and associated physiological changes	Priya Joyce
3.00 – 3.30 pm	Afternoon tea	
Session 3	Physiology of perennial crops	Chair: Carl Mesarich
3.30 – 3.45 pm	Apple fruit set is influenced by altered floral bud density but not by reduced carbohydrate reserves.	Ken Breen
3.45 – 4.00 pm	Rootstock vigour and gibberellins (GA4+7) modify root-to-shoot dry matter allometry, floral precocity and flowering intensity of young 'Royal Gala' apple trees	Daya Dayatilake
4.00-- 4.15 pm	Current challenges in Gold3 kiwifruit nutrient management research	Marya Hashmatt
Session 4	Oral poster session	Chair: Huub Kerckhoffs
4.15 – 5.00 pm	3 min Poster Presentations	
5.00 – 6.00 pm	Poster session with drinks and nibbles	
Evening	Free/NZSPB members dinner	

Wednesday 5th July

Session 5	Carbon assimilation/ biotechnology	Chair: Kim Richardson
9.00 -9.45 am	Keynote Photorespiration: the missing link that regulates plant carbon and nitrogen balance	Arnold Bloom
9.45 – 10.00 am	Mutagenic dissection of flowering time loci in <i>Medicago truncatula</i>	Geoffrey Thomson
10.00 – 10.15 am	A novel technology to enhance plant growth rates by mimicking C ₃ plants grown under high CO ₂	Somrutai Winichayakul
10.15 – 10.45 am	Commercialising yield traits in crops: the international public-private partnership model	Greg Bryan
10.45 – 11.15 am	Morning tea	
Session 6	Novel breeding technologies	Chair: David Lewis
11.15 – 11.30 am	Modification of Strigolactone signalling by CRISPR/Cas9	Revel Drummond
11.30 – 11.45 am	Exploiting agrobacterium-mediated transient expression for gene discovery via Infiltration RNA-seq and CRISPR-Cas9 genome editing	Donna Bond
11.45 – 12.00 pm	The JASON protein prevents unreduced gamete formation and is under translational regulation in Arabidopsis	Lynette Brownfield
12.00 – 12.15 pm	Exploring the differences between wild and domesticated apple germplasm by comparative transcriptomic and metabolomics	Jung Cho
12.15 – 12.45 pm	150 years of Discovery with Royal Society Te Apārangi	Barry Scott
12.45 – 1.30 pm	Lunch	
Session 7	Digital horticulture/Plants in the environment (concurrent with session 8)	Chair: Huub Kerckhoffs
1.30 – 1.45 pm	Chlorophyll fluorescence as a tool to detect chilling injury before it is irreversible	Julian Heyes
1.45 – 2.00 pm	Fruit development and skin changes of <i>Actinidia chinensis</i> 'SunGoldTM' kiwifruit	Leo Lai
2.00 –2.15 pm	A model to generate the random physical geometry of fruit in packages	Jamal Olatunji
2.15 – 2.30 pm	The effect of temperature on growth and flowering of 'high performance' Mānuka (<i>Leptospermum scoparium</i>) clones	Rachael Sheridan
2.30 – 2.45 pm	Development of taste and flavour in gold kiwifruit (<i>Actinidia chinensis</i> Planch. var. <i>chinensis</i> 'Zesy002')	Mike Clearwater
Session 8	Germplasm conservation (concurrent with session 7)	Chair: Maree Debenham
1.30 – 1.45 pm	Cryo-technologies for conservation of high-health clonal crop germplasm	Ranjith Pathirana
1.45 – 2.00 pm	Germplasm conservation through seed cryopreservation	Jayanthi Nadarajan
2.00 – 2.15 pm	Combination of chemotherapy, thermotherapy and cryotherapy efficiently eradicates raspberry bushy dwarf virus from infected raspberry	Liya Mathew
2.15 – 2.30 pm	Challenges in conserving seed of New Zealand indigenous flora	Craig McGill
2.30 – 2.45 pm	Seed micro-morphometry and quantity of 'air-trapped' in three <i>Dendrobium</i> species	Surya Diantina
2.45 – 3.00 pm	Core collection development for targeted and manageable conservation of genetic diversity	Kioumars Ghamkhar
3.00 – 3.30 pm	Afternoon tea	

Session 9	Plants and the environment	Chair: Mary Christey
3.30– 3.45 pm	Shedding light, growing old, and warming up: causes of mānuka nectar variability	Stevie Noe
3.45– 4.00pm	Investigating the function of the conserved <i>Ciborinia camelliae</i> -like small secreted protein (CCL-SSP) family from <i>C. camelliae</i> , <i>Sclerotinia sclerotiorum</i> and <i>Botrytis cinerea</i> .	Hannah McCarthy
4.00 – 4.15 pm	Isolation of diesel-tolerant callus lines of Marigold-Nemo mix (<i>Tagetes patula</i> L)	Solomon Wante
4.15 – 4.30 pm	Effects of drought and salinity on the physiology of the New Zealand mangrove (<i>Avicennia marina</i> subsp. <i>Australasica</i>) under different non-structural carbohydrate levels	Sridevi Ravi
4.30 – 6.00 pm	AGMs	NZIAHS/NZIAPB/NZSPB
6.30 pm	Conference dinner	

Thursday 6th July		
Session 10	Plant development	Chair: Paula Jameson
9.00 – 9.45 am	Keynote - NZSPB Annals of Botany Award System-oriented studies of fruit metabolism	Yves Gibon
9.45 – 10.00 am	Peptide hormones mediate root and nodule development in response to nitrogen availability	Nijat Imin
10.00 – 10.15 am	Transcriptomic changes in Arabidopsis leaves indicate causes for loss of stress tolerance with age	Aakansha Kanojia
10.15 – 10.30 am	Delving into the molecular mystery of mast flowering	Samarth Kulshrestha
10.30 – 11.00 am	Morning tea	
Session 11	Agronomy (concurrent with session 12)	Chair: Mike Dodd
11.00 – 11.15 am	Variation in water use within and between perennial ryegrass populations	Cory Matthew
11.15 – 11.30 am	Benchmarking the symbiotic performances of two white clover (<i>Trifolium repens</i> L.) cultivars with strains of rhizobia	Sean Weith
11.30 – 11.45 pm	Functional analysis of Buffalo grass (<i>Stenotaphrum secundatum</i>) expressing a novel gene conferring glufosinate-resistance	Siriwat Boonchaisri
11.45 – 12.00	Analysis of awareness and adaptation to climate change among farmers in Fiji	Deeksha Krishna
12.00 – 12.15 pm	Ryegrass germplasm accessions responses to drought stress	Daliya Cyriac
12.15 – 12.30 pm	Somatic cell selection for chlorsulfuron-resistant mutants in potato: identification of point mutations in the acetohydroxyacid synthase gene	Tony Conner
12.30 – 1.15 pm	Lunch	
Session 12	Postharvest (concurrent with session 11)	Chair: Julian Heyes
11.00 – 11.15 am	Biodiversity within apricot germplasm of fruit ethylene and sugar content at harvest and postharvest in France and New Zealand	Claire Scofield
11.15 – 11.30 am	Reassessing temperature and humidity storage conditions for maintaining quality of 'Kakariki' feijoa	Jacqueline Oseko
11.30 – 11.45 am	Colonization of lettuce by <i>Listeria monocytogenes</i> and its biofilm formation	Emmanuel Kyere
11.45 – 12.00 pm	Tolerance of apples to disinfecting x-ray treatments	Alan Woolf
12.00 – 12.15 pm	Titrateable acidity in 'Zesy002' (SunGold) kiwifruit	Paul Pidakala

12.15 – 12.30 pm	'Hortgem Tahi' kiwiberry: how early can we harvest?	Christina Fullerton
12.30 – 1.15 pm	Lunch	
Session 13	Plant development	Chair: Rainer Hofmann
1.15 - 1.45 pm	NZSPB Michael McManus Award for Best Student Paper A conserved cis-regulatory module determines germline fate through activation of the transcription factor DUO1 promoter	Ben Peters
1.45 – 2.00 pm	Control of apple fruit size: the importance of cell number and auxin	Karine David
2.00 – 2.15 pm	Winter is coming: WLC facilitates silencing of FLC during vernalization in Arabidopsis	Rebecca Bloomer
2.15 – 2.30 pm	Integrating xylem and phloem flux into a whole-plant model that simulates fleshy fruit growth	Junqi Zhu
2.30 – 2.45 pm	Student awards for best oral presentation and best poster Closing remarks	