


Appendix III: 2004 Conference Program

	ACEWG Australasian Controlled Environment Working Group	International Controlled Environment Meeting 14-17 March 2004, Brisbane Australia
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Sunday 14 March - Mecure Hotel, North Quay

17:00 - 20:00	Registration/Mixer/Welcome
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Monday 15 March - Queensland Bioscience Precinct, UQ

09:00 - 09:30	Opening Address: Mark Roehrs
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Session 1: Showcasing technology Australasia/Pacific Rim - Reg Quiring

09:30 - 09:45	The Controlled Environment Facility (CEF) at CSIRO Plant Industry, Brisbane - Rob Kerlake
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09:45 - 10:00	Plant growth facilities and services at CSIRO Plant Industry, Canberra - Tony Agostino
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10:15 - 10:30	The Adelaide CE Facility - Lance Hoare
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10:30 - 11:00	Morning Tea
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Session 2: Showcasing technology Australasia/Pacific Rim cont - Chair: Chieri Kubota

11:00 - 11:15	Controlled Environment Facilities, School of Plant Science, University of Tasmania - Ian Cummings
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11:15 - 11:30	The New Zealand Controlled Environment Laboratory (NZCEL) - Cara Norling, Paul Austin, Liz Halligan, Harry Wiggins, Jeffrey Roberts and Tessa Mills
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11:30 - 11:45	The IRRI Phytotron - Arnold Manza
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11:45 - 12:00	The Space Life Sciences Lab Phytotron Kennedy Space Centre - Neil Yorio and John Sager
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12:00 - 12:30	Summary and general discussion
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12:30 - 13:30	Lunch
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Session 3: What Controlled Environments can/can't do technically

13:30 - 16:00	Tour of QBP and CEF and Poster session
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Session 4 What Controlled Environments can/can't do technically - Chair: Lynton Incoll

16:00 - 16:20	Lighting systems - Rob Kerlake
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16:20 - 16:40	Technical Considerations for RH/VPD Control in Controlled Environments - Reg Quiring
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16:40 - 17:00	Status of CO ₂ Control Technology in Controlled Environment Systems; Possibilities and Limitations - Mark Romer
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17:00 - 17:20	Temperature Control: Practical issues related to study of temperature response dynamics - Paul Austin, Craig Woodward, Jochem de Winter, Jacob de Bruin, Henry Wiggins, Huub Bakker and Tony Patterson
17:20 - 17:40	Air movement for promoting gas and heat exchange - Yoshiaki Kitaya
17:45 - 19:30	Business Meeting - NCR-101/CEUG
19:30 - 22:30	BBQ Dinner (on campus)

Tuesday 16 March - Queensland Bioscience Precinct, UQ	
Session 5 Enhancing controlled environment capabilities to assist plant science - Chair: Frank Smith	
09:00 - 09:15	Using controlled low root-zone temperatures with aeroponics to lesson expression of heat stress in Arabidopsis - Paul Austin, Chia Tet Fatt, He Jie, Andrew Allan, Duncan Stanley and Lee Sing Kong
09:15 - 09:30	Continuous gas exchange measurements in controlled environments - AJ Both, K Kumasaka and J Cavazzoni
09:30 - 9:45	Manipulating whole tree root temperatures in controlled environments affects budbreak in apple - Dennis Greer, Carla Norling, Harry Wiggins
9:45 - 10:00	Summary and general discussion
Session 6 Special lecture topic - Chair: Ted Tibbitts	
10:00 - 10:30	Controlled Environment studies for NASA's spaceflight research - Gary Stutte and Ray Wheeler
10:30 - 11:00	Morning Tea
Session 7 Science showcasing manipulating environments and plant processes I - Chair: Bruce Bugbee	
11:00 - 11:15	Temperature control of tuber formation - Ted Tibbitts
11:15 - 11:30	Using controlled environments to identify temperature related phenomena in sugar cane - Graham Bonnett
11:30 - 11:45	Vernalisation of sugar beets in controlled environments - Kevin Sawford
11:45 - 12:00	Role of far red light in flowering and stem extension of plants - Erik Runkle
12:00 - 12:15	Environmental control for quality preservation of transplants - Chieri Kubota
12:15 - 12:30	Summary/general discussion
12:30 - 14:00	Lunch
Session 8 Science showcasing manipulating environments and plant processes II - Chair: Julian Franklin	
14:00 - 14:15	Tequila, tomatoes and insectivorous plants with rice, some challenges met by the plant stress unit at Sussex - Martyn Stenning
14:15 - 14:30	Rule-based model to optimise CO ₂ , light and ventilation for consistent plant production and energy saving - Lou Albright, Jeffrey Ho and David de Villiers
14:30 - 14:45	Use of CEs for developing crop models - Dave Fleisher

14:45 - 15:00	Two new techniques and three new instruments for real-time measurement of plant growth - Bruce Bugbee
15:00 - 15:15	Elevated CO2 canopy architecture and disease interaction - Sukumar Chakraborty
15:15 - 15:30	Summary and general discussion
15:30 - 16:00	Afternoon Tea
Session 9 Manipulating genes in Controlled Environments - Chair: Tony Agostino	
16:00 - 16:15	Controlled Environments for gene expression. Julian Franklin
16:15 - 16:30	Environment and expression of genes for flowering - Rod King, Tamotsu Hisamatsu and Candice Sheldon
16:30 - 16:45	Manipulating genes involved in phosphate nutrition of plants - Frank Smith
16:45 - 17:05	Large scale gene expression analyses under controlled environments - Kernal Kazam
17:05 - 17:20	The use of the New Zealand Controlled Environment Laboratory for gene function discovery in Arabidopsis - Andrew Allan, Cara Norling and Paul Austin
17:20 - 17:30	Summary and general discussion
18:00	Transport to Australian Woolshed for conference dinner
22:30	Transport to hotels

Wednesday 17 March - Queensland Bioscience Precinct, UQ	
Session 10: Controlled environment technologies to assist plant science - Chair: Paul Austin	
09:00 - 09:15	The phytometric system: A new answer to the challenge of measuring radiation for plant applications - Gilberto J C da Costa and Joel L Cuello
09:15 - 09:30	Testing for radiation freezing in controlled environments - Mick Fuller
09:30 - 09:45	New perspectives in air conditioning of research greenhouse compartments- Alex Turkewitsch
09:45 - 10:00	Optimizing LED lighting strategies for ALS-related crops -, Gioia Massa, Jonathan Frantz, Jill Montgomery, Julia Badger, George Chiu, Jeffery Emmerich, Robert Morrow and Cary Mitchell
10:00 - 10:15	Non-contact water stress detection techniques - Peter Ling and Yang Yang
10:15 - 10:30	Summary
10:30 - 11:00	Morning Tea
Session 11: Open Forum - Chair: Denise Green	
11:00 - 11:45	Open Forum - Is there still power in controlled environments? Advocates /commentators: <ul style="list-style-type: none"> • Julian Franklin • Garry Taylor • Reg Quiring

	<ul style="list-style-type: none">• Tony Agostino
Session 12: Closing Address	
11:45 - 12:30	Closing Address - Cary Mitchell
12:30 - 13:30	Lunch
13:30	Sunshine Coast tour departs