



HORTICULTURE FOR THE FUTURE – AUSHS, NZIAHS AND AUSTRALASIAN POSTHARVEST GROUP JOINT CONFERENCE

The inaugural joint conference of the three leading Australasian and New Zealand horticultural R&D Societies will be held at Mantra Erskine Beach Resort, Lorne, Victoria from September 18 to 22, 2011, with a focus on attracting and supporting young people in order to build capacity in horticulture.

The Australasian Postharvest Horticulture Conference Organising Committee (APHC), the Australian Society for Horticultural Science (AuSHS) and the New Zealand Institute of Agriculture and Horticulture Science (NZIAHS) have joined forces in order to create an event of international significance around Horticultural Research, Development, Extension and Training.

To achieve international relevance and recognition, the conference will have a scientifically and commercially balanced programme including invited world-class speakers relevant to the theme of the conference: "Horticulture for the Future".

Session themes will include:

- Climate variability and resource-use efficiency
- Sustainable pre- and post-harvest
- Fruits, vegetables and health
- Growing systems
- Value chain, marketing, and consumers
- Industry extension in horticulture and;
- Training and capacity building in horticulture
- Horticulture in developing countries
- Metabolomics in horticulture
- Postharvest physiology (including ethylene)
- Postharvest storage (CA, MA, postharvest treatments)
- Market access & quarantine
- Postharvest pathology
- Storage disorders and treatments
- Other

Lorne is around 70 kilometres south west of Geelong on the Great Ocean Road and situated on a protected bay overlooking Bass Strait. The rich rainforest of the Otways begins in the valleys behind Lorne that are flush with tree ferns, sparkling brooks and waterfalls.

The only beachfront property in Lorne, Mantra Erskine Beach Resort offers wonderful accommodation in one of Australia's most sought after destinations, the Great Ocean Road. Built around the oldest guesthouse in Victoria, Mantra Erskine Beach Resort is now a part of the rich history of Lorne and the surrounding region.

With the beachfront location and the 12 acres of beautifully landscaped gardens that surround the resort, Mantra Erskine boasts the title of largest residential conference destination in Victoria

Invited Speakers

Dr Brent Clothier

Brent Clothier is Group Leader of Systems Modelling within Plant & Food Research. Brent is an Adjunct Professor in the School of Earth & Environment of the University of Western Australia, and an Adjunct Professor in the New Zealand Life Cycle Management Centre of Massey University.

Brent has a BSc (Hons) from Canterbury University, and a PhD and DSc from Massey University. Brent is a Fellow of the Royal Society of New Zealand, the Soil Science Society of America, the American Agronomy Society, the New Zealand Soil Science Society, and the American Geophysical Union.

Brent has published over 200 scientific papers on the movement and fate of water, carbon and chemicals in production systems, as well as on environmental policy and natural capital valuation. Brent is Joint Editor-in-Chief of the international journal *Agricultural Water Management*.



Professor Guglielmo Costa

Prof Guglielmo Costa is Head of Department of Fruit Tree and Woody Plant Sciences at the University of Bologna, Italy.

Prof Costa's major research interests are in the physiology of growth regulators and hormones of fruit trees, in the fruit quality parameters evaluation and in the domestication of kiwifruit. As far as growth regulators are concerned, the activity concerns the evaluation of the efficacy of several growth retardant, fruit chemical thinning and fruit setting agents. Guglielmo Costa is also involved in the evaluation of the efficacy of growth regulators and growth substances active as ethylene inhibitors to affect fruit maturation "in planta". Some of the study lead to the involvement of study the phenols composition of the spayed trees and the resistance induced against some diseases. As far as the fruit quality, Guglielmo Costa recent studies concerns the use of innovative non-destructive technique (i.e. near infrared spectroscopy - NIRs- and electronic nose). A original NIRs has been realized in his research group and used for the determination of the internal quality parameters of several major fruit species as well as for the determination of new harvesting indexes, for grouping homogeneous classes of fruits on the bases of their ripening stage, etc. Fruit quality was also faced as the amount of antioxidants of different species and cultivars as affected by methods of cultivation, cultural management and climatic and soil cultivation environment. Guglielmo Costa activity on kiwifruit started since the introduction of this specie back in the '70. Since then the activity was dedicated to the domestication of the specie going through, rooting, cultivar evaluation, cultural management techniques (pruning, fertilization, growth regulators application, pollination, etc), and more recently breeding.

Prof Guglielmo Costa is Chairman of the Working Group on the Fruit chemical thinning of the EUFRIN network; he is the secretary of the Working Group on Bioregulators in Fruit Production of the International Society for Horticultural Sciences (ISHS); he recently co- organized the First Joint Meeting of the EUFRIN network and organized the Italian Symposium of Kiwifruit. He has regularly served as referee for the European Journal of Horticultural Science, *Advances in Horticultural Sciences*.



Dr Ian Goodwin

Dr Ian Goodwin has over 25 years experience in horticulture research and development with excellent knowledge of irrigation, fruit tree agronomy and viticulture production. Particular skills include field measurement and desktop simulation of transpiration, light interception, plant water stress, fruit composition, soil moisture status and microclimate. Career highlights have been to research and develop regulated deficit irrigation and investigate simple approaches to estimate crop water requirements. He has written several books including "Micro-irrigation of vines and fruit trees" and "Irrigation of vineyards: A grapegrower's guide to irrigation scheduling and regulated deficit irrigation". In August 2006, he convened the 5th International Symposium on Irrigation of Horticultural Crops. Ian is currently employed by the Victorian Department of Primary Industries based at Tatura and leads several projects including "New tools to overcome spatial variation in crop water requirements" and the Australia-New Zealand multi-agency project titled "Soil, water and nutrient productivity in pome fruits".



Dr Jim McFerson

Jim has been the manager of the Washington Tree Fruit Research Commission since 1999, and is also an adjunct faculty member with WSU's Horticulture Department.

Jim McFerson was born and raised in Midwest. In 1975, Jim received a BS from the University of Wisconsin-Madison in Horticulture; in 1977, an MS in Horticulture from Texas A&M, and in 1982, Jim earned his doctorate in Plant Breeding and Genetics from the University of Wisconsin-Madison. From 1983-1988, Dr. McFerson worked as a vegetable breeder for private seed company, and from 1989-1998 Jim was a Research Geneticist with USDA Ag Research Service at Cornell University in Geneva NY.

McFerson has been active in pursuing the National Tree Fruit Technology Roadmap and many industry research groups:

- Rosaceous Genomics, Genetics, and Breeding Executive Committee
- Tree Fruit Technical Advisory Committee
- Prunus, Pyrus, and Malus Crop Germplasm Committees
- US Apple Research Committee Specialty Crops Research Team

Associate Professor Silvana Nicola

Silvana Nicola is Associate Professor at the University of Torino in Vegetable Crops & Medicinal and Aromatic Plants, where she teaches at BSc, MSc and PhD level.

Silvana has a MSc in Agricultural Science, from the University of Torino (1988), and a PhD in Horticulture, from the University of Florida, USA (1997). She is Chairperson of the Section Vegetables of the International Society for Horticultural Science and in the board of the Italian Society for Horticultural Science.

Since 1988 Silvana has worked in Horticultural Sciences on: Soil and Soilless Culture, Protected Cultivation, Pre- and Postharvest handling and processing, Quality and Safety, Supply Chain Management and Efficiency Systems.

Silvana is author or co-author of 180+ scientific publications (100+ International), referee of several international scientific journals and research projects, and member of scientific committees of numerous international conferences.

Silvana worked for four years at the University of Florida (USA), as Research Assistant (1993-1996) and Teaching Assistant (1995), and for three months at the Universidad Politécnica de Cartagena, Spain (2003). She has been invited for lecturing at College HertoDenBosch, The Netherlands (2000); Universidad Politécnica de Cartagena, Murcia, Spain (2003); Ain Shams University, Cairo, Egypt (2004); Häme Polytechnic, Lepaa, Finland (2004); Agriculture University, Plovdiv, Bulgaria (2004); Universidad Castilla-La Mancha, Albacete, Spain (2007); Università di Palermo, Italy (2007); Instituto Tecnológico del Valle de Oaxaca, Oaxaca, Mexico (2007, 2008, 2009); Zhejiang Forestry University, Lin'an, Hangzhou, Zhejiang Province, China (2008). She is external examiner of MSc and PhD students for the University of Pretoria, South Africa, and reviewer of Professor Positions for the NRF (National Research Foundation), South Africa.



Professor Jim Pratley

Jim is Research Professor of Agriculture at Charles Sturt University and Secretary of the Australian Council of Deans of Agriculture. He graduated with BSc and PhD degrees from the University of NSW and took up an academic position at Wagga Wagga where he has been since 1972. He was Foundation Dean of Science and Agriculture at Charles Sturt University from 1990 until 2006.

Professor Pratley has taught courses in agronomy and related areas and has published widely in conservation farming, weed management, herbicide resistance and allelopathy.

He has edited three books, written 20 book chapters, published more than 70 research papers and more than 70 conference papers.

He is a former President of the Australian Society of Agronomy and former Vice President of the International Allelopathy Society.

He has served on the Boards of the Cooperative Research Centres of Viticulture, Sustainable Rice Production, Weed Management Systems and Plant Based Management of Dryland Salinity. He is a member of the Research Advisory Committee of the Australian Farm Institute, the NSW Primary Industries Minister's Science Council and the Federal Minister's Rural Research and Development Council.



Dr Ute Roessner

Head of Analytics, Metabolomics Australia
Node leader, Australian Centre for Plant Functional Genomics, School of Botany, The University of Melbourne

Dr. Roessner obtained her PhD in Biochemistry at the MPI for Molecular Plant Physiology in Germany, where she developed novel GC-MS methods to analyse metabolites in plants. Together with the application of sophisticated data mining the field of metabolomics was born and is today an important tool in biological sciences, systems biology and biomarker discovery. In 2003 she moved to Australia where she established a GC-MS and LC-MS based metabolomics platform as part of the Australian Centre for Plant Functional Genomics. Since 2007 Dr. Roessner has been involved in the setup of Metabolomics Australia (MA), an Australian Federal Government investment (National Collaborative Research Infrastructure Strategy 5.1 Evolving Biomolecular Platforms) through Bioplatforms Australia Ltd and now leads the MA node at the School of Botany, The University of Melbourne, Australia.



Dr David Rudell

Plant/ Postharvest Physiologist
Tree Fruit Research Laboratory
USDA, ARS, Wenatchee, WA, USA.

Dr Margot Skinner

Margot Skinner is a Principal Scientist at Plant and Food Research and leads a team developing Wellness Foods, aimed at adding value to New Zealand's primary products through fresh and processed functional foods. The work involves understanding some of the health benefits of fruits and vegetables and developing novel fruit and vegetable ingredients with defined health benefits to make prototype functional foods in the target health areas of protection from oxidative stress and inflammation, mental performance and gut and immune health

Margot is an Adjunct Professor in the Institute of Food Nutrition and Human Health, Massey University and a Member of the Board of Studies for the Food Science programme, University of Auckland. Margot comes from a background of biomedical research in both academia and industry with over 30 years of experience, and has published extensively, across a wide range of biomedical and food related science subjects including immunology, antioxidants and physiologically relevant models for providing insights into the health benefits of fruit and other foods. She has a particular interest in immunonutrition and is an executive committee member of iFINER (International Forum for ImmunoNutrition Education and Research). She has recently been involved in developing relationships for New Zealand in the functional food R&D area in Japan and Korea and is a Visiting Professor at the University of Shizuoka in Japan.



Dr Stuart Tustin

Stuart Tustin is presently the Science Leader for the Crop and Fruit Production Group within The New Zealand Institute for Plant & Food Research Ltd. Since the early 1980's he has been located at the Hawke's Bay Research Centre and has followed a wide range of research interests in the pomology, crop physiology, fruit development and production systems of apples and pears. Particular themes in his research interests include enhancement of crop quality and its influence on production efficiency, regulation and control of fruit development, orchard planting systems and intensification and rootstock-induced control of tree development especially the rootstock dwarfing phenomenon. He has close interactions with breeding colleagues in the commercialisation phase of their new apple and pear cultivars. His research activities have increasingly become multidisciplinary collaborations with colleagues in postharvest science, molecular genetics, functional genomics, modelling and developmental biology within an overarching focus on the biology and regulation of



fruit quality in apple and pear. In his current position he also coordinates research strategies in crop physiology across a broad range of crop sectors including kiwifruit, winegrapes, stonefruit, avocado and field crops as well as apples and pears.

Professor Christopher Watkins

Chris Watkins conducts a postharvest science research program with a major focus on pre and postharvest factors that affect quality of fruits and vegetables. This research includes storage quality of new apple cultivars, the effects of postharvest techniques on the nutritional quality of fruit, and investigation into the underlying mechanisms of fruit responses to storage conditions such as temperature, atmosphere, the inhibitor of ethylene perception, 1-methylcyclopropene (1-MCP), and the interaction of these factors with the development of storage disorders.

Chris has been at Cornell University since 1994, and is a professor in the Department of Horticulture, and Associate Director of Cornell Cooperative Extension. Prior to taking his position at Cornell University, he was a postharvest scientist in DSIR and the Horticultural Research Institute of New Zealand. His BS and MS (Hons) degrees were completed at the University of Auckland, NZ, and his PhD was completed at Rutgers, New Jersey. Chris has published 119 papers in refereed journals, 11 book chapters, 37 Acta Horticulturae and other conference proceedings, and 92 technical and newsletter articles.



Associate Professor Matthew D. Whiting

Associate Professor/Associate Scientist
College of Agricultural, Human, and Natural Resource Sciences
Horticulture and Landscape Architecture
Washington State University, US

Registration fees

Early Bird Registration (before 1 August 2011)	\$650
Standard Registration (after 1 August 2011)	\$750

Important Dates

- **Abstracts due:** 29 April 2011
- **Acceptance of abstracts emailed:** 17 May 2011
- **Provisional program available:** 17 May 2011
- **Presenters registration due:** 30 June 2011

For more information visit

www.cdesign.com.au/horticulture2011

Program

The theme of 'Horticulture - sustaining lives, livelihoods and landscapes' - will feature the following sub-themes:

- Tropical fruits and vegetables
- Horticulture for human health and wellbeing
- Sustaining landscapes
- Quality of horticultural products.

We are developing symposia and/or workshops within each sub-theme to explore how innovation in science can benefit commercial and lifestyle enterprises, which are faced with ever-changing environmental influences.

While there will be a number of keynote speakers addressing the main topics, we strongly encourage all conference delegates to take part in the symposia and workshops.

Learn more about IHC2014 at the Lorne Conference

A team from the IHC2014 Organising Committee will be attending the Lorne conference to provide up-to-date information and to seek your involvement to make IHC2014 a great success for the Australasian Region and its horticulture. Please come with your ideas and participate in workshops to assist us stage an outstanding congress in Brisbane. We also hope you will be an ambassador for IHC2014 in Brisbane, if the opportunity arises for you. We will provide promotional banners and brochures and other resources to assist you. We will also have stocks of our distinctive IHC2014 team polo shirts available for sale in Lorne

For more information visit

www.IHC2014.org

NEW JOURNAL FOR HORTICULTURE LAUNCHED.

The JOURNAL OF HORTICULTURE AND FORESTRY (JHF) is a multidisciplinary peer-reviewed journal published that will be monthly by Academic Journals (<http://www.academicjournals.org/JHF>). JHF is dedicated to increasing the depth of the subject across disciplines with the ultimate aim of expanding knowledge of the subject.

Call for Papers

JHF will cover all areas of the subject. The journal welcomes the submission of manuscripts that meet the general criteria of significance and scientific excellence, and will publish:-

- Original articles in basic and applied research
- Case studies
- Critical reviews, surveys, opinions, commentaries and essays

You are invited to submit your manuscript(s) to *jhf@acadjournal.org* for publication and authors will be informed of the decision on their manuscript(s) within four weeks of submission. Following acceptance, a paper will normally be published in the next issue. Instruction for authors and other details are available on our website; <http://www.academicjournals.org/JHF/Instruction.htm>

JHF is an Open Access Journal

One key request of researchers across the world is unrestricted access to research publications. Open access gives a worldwide audience larger than that of any subscription-based journal and thus increases the visibility and impact of published works. It also enhances indexing retrieval power and eliminates the need for permissions to reproduce and distribute content. JHF is fully committed to the Open Access Initiative and will provide free access to all articles as soon as they are published.

Ochonogor Kenneth

Editorial Assistant

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PLANTS IN ACTION.

From Gerard McEvilly, "Plants in Action" has been published online with free access

<http://plantsinaction.science.uq.edu.au/edition1/?q=content/home-page>

This seems to be a great textbook with strong ANZ focus.

RURAL RESEARCH AND DEVELOPMENT COUNCIL DRAFT INVESTMENT PLAN

The Rural Research and Development (R&D) Council is the federal government's key advisory body on rural R&D. The principal goal of the council is to provide high level advice and coordination to better target and improve the effectiveness of the government's investment in rural R&D.

This enhanced focus on R&D will improve the productivity, profitability, sustainability and global competitiveness of Australia's agriculture, fisheries, forestry and food industries, with benefits for individual rural businesses, the environment and the wider community.

The council works closely with the rural R&D corporations and companies, industry sectors, research providers, state and territory jurisdictions and relevant Australian Government agencies to strengthen rural R&D through improved collaboration, facilitation and prioritisation of investment and performance measurement and reporting.

The Rural R&D Council has developed a draft National Strategic Rural R&D Investment Plan released on 11 February 2011 for comment. The draft plan discusses the challenges facing the rural sector, including climate change, food security and resource sustainability and the core role that research, development and extension plays in driving productivity growth. The Rural R&D Council is now considering the feedback received before finalising the draft plan for the Minister's consideration.

The following is the executive summary from the plan. The full draft plan can be downloaded from www.daff.gov.au/agriculture-food/innovation/council

Draft Plan Executive Summary

This National Strategic Rural Research and Development Investment Plan is intended to provide high-level strategic direction and coordination to a fragmented rural RD&E system. The system is estimated to operate on an annual turnover of almost \$3 billion, across the agriculture, fisheries and forestry sector, along the value-chain and in areas related to the rural sector more broadly.

In the coming decades, Australia's rural sector will face several challenges in respect of its prosperity. Most notable will be climate change and the need to increase productivity and sustainability concurrently in order to contribute to the food supply for a growing global population while maintaining the resource base for future generations. The rural sector in Australia and elsewhere will be central to efforts both to mitigate and adapt to climate change.

Meeting these challenges will require long-term transformation of the rural sector, defined broadly in the plan to include the communities associated with agriculture, fisheries and forestry, as well as related industries along the value chain. Innovation in biotechnology and information and communications technology will significantly alter the production of food, fibre, renewable fuels and manufactured goods that rely heavily on petrochemical inputs.

The Rural Research and Development Council has a 'big vision' for rural RD&E: that it play a lead role in increasing returns along value chains and in Australian communities by:

- doubling rural sector output over the next 30 years while consuming proportionally fewer resources
- developing a range of technologies and knowledge to contribute to healthy Australian lifestyles and global food security
- producing a wider product range, including food, fibre, energy and bio-based products, in addition to ecosystem services.

For the rural sector to achieve these outcomes, the Council believes that the Australian Government's investment in rural RD&E needs to be better targeted, given the well established time lag between rural RD&E expenditure and improvements in prosperity and security. Further, there needs to be an increased focus on international collaboration to share knowledge. The Council takes a risk management approach to identifying and assessing uncertainties and recommends allocating resources to make the most of opportunities and to minimise the likelihood, or impact, of adverse events.

The Council has determined the following investment goals—to:

- facilitate ongoing industry development and adaptation to change through RD&E
- leverage innovation for growth along value chains, with greater sharing of risk and reduced reliance on natural resources
- integrate natural resource management with farming systems to use natural resources more efficiently
- analyse and plan for climate change with sophisticated modelling to build understanding and develop adaptation practices and resilient systems
- build human capacity, capital and capability through high-quality education and training
- reward and retain world-class researchers through commitments above current investment levels
- develop social research and tools that enable rural communities to embrace change, enhance adoption and manage the impact of change
- develop elite genetic resources, emerging technology platforms and multidisciplinary capability for application to rural problems and opportunities
- invest to support, and in some cases accelerate, cross-sectoral RD&E strategies, such as those relating to bioenergy/biofuels and food and nutrition
- systematically link and collaborate with leading international groups to access funds, markets and knowledge to address shared Australian and global needs.

After consultation with stakeholders, these goals were distilled into five investment themes:

- industry development
- sustainable production
- capacity in people
- transformational RD&E
- international links.

Industry development and sustainable production are viewed as interdependent and influenced in the longer term by transformational RD&E. People are considered central to the system because it is through their initiative, innovation and motivation that the investment plan will be relevant in the long term. International links encompass the other themes, recognising that the challenges facing the rural sector are global and that Australian researchers are, and must continue to be, active participants in international research networks.

The Council considers that these five themes are broadly consistent with the Australian Government 2007 Rural Research and Development Priorities. These are: productivity and adding value; supply chain and markets; natural resource management; climate variability and climate change; biosecurity; innovation skills; and technology. Activities conducted according to those priorities should continue, and their efficacy will be identifiable through overall performance measurement.

Based on analysis of the current rural RD&E system and stakeholder feedback, the Council believes that the investment portfolio should achieve the following balance:

- 40 per cent for transformational investment for long-term outcomes
- 30 per cent for near-term adjustment for mid-term outcomes
- 20 per cent for capacity building in people
- 10 per cent for international links.

Evaluating the triple bottom line returns from investment in rural RD&E will be critical to guiding future investments and meeting accountability requirements. While using business metrics to monitor the economic outcomes of RD&E is well established, much progress is still to be made in evaluating funds invested to achieve environmental and social outcomes.

Source: www.daff.gov.au/agriculture-food/innovation/council

PRODUCTIVITY COMMISSION SUBMISSION CONCERNING THE RURAL RESEARCH AND DEVELOPMENT COUNCIL DRAFT INVESTMENT PLAN OUTLINED ABOVE.

In the previous newsletter a summary of the Productivity Commissions investigations into funding of rural RD&E through the RDC's was presented. This report was submitted to Government on 15 February and government is obliged to table this report to both houses within 25 days of the date of submission. Unfortunately the final report submitted to government is still not downloadable from the productivity commissions website.

Having performed this study, however, the Productivity Commission felt obliged to submit a response to the Rural Research and Development Councils draft investment plan. This forms a 12 page document which can be downloaded from <http://www.pc.gov.au/research/submission/rural-research>.

While the commission is supportive of many aspects of the plan, the Commission has some concerns about the thrust of, and underpinning for, the Council's draft plan. These are explained fully in their document but the thrust of each is provided below. The points below are an extreme abbreviation and they are fully explained and expanded on the full document. The quotes are from the introductory paragraph of each concern point and are intended as an appetiser. Please download and read the full document before commenting on these points.

1) An over-emphasis on the contribution of R&D to the rural sector's performance

'Consistent with what appears to be a general feature of rural R&D policy making in Australia, the 'big vision' role for rural R&D in the draft plan gives little weight to means other than domestic investment in research for improving the economic, environmental and social performance of the rural sector.'

2) The degree of direction

'...care is required to ensure that a concern to coordinate R&D programs and associated institutional structures does not unduly diminish diversity, flexibility and competition. There is also a broader risk inherent in strategic planning initiatives that governments will take on too great a role in directing specific research outcomes.'

3) The lack of a cogent basis for government involvement

'...a general deficiency in the plan — namely the lack of a clear basis for determining when government should be involved in rural R&D investment decisions.

The primary rationale drawn on by the Council for its planning blueprint is ostensibly that the rural sector will face many challenges in coming years. Related to this, the Council appears to have unquestioningly accepted the food security catchcry that has come to dominate discussions on future rural R&D policy.

However, the many challenges that the rural sector will face in coming years are not of themselves a reason for government to take the lead role. In fact, as most sectors in the economy will face significant challenges — including from climate change, an ageing workforce, and intensified global competition — reliance on this 'rationale' would require government to take charge of investment decisions across a wide sweep of economic activity.'

4) Lack of supporting information and analysis

'The draft plan reveals little detail about the analytical underpinnings for many of the Council's detailed findings and recommendations, including alternative approaches that may have been considered and rejected. It is highly desirable that, in the final version of the plan or in the supporting published documentation, this sort of analytical detail is provided. This would give the Government and other stakeholders the opportunity to satisfy themselves as to the robustness of the Council's conclusions and suggested future approaches.'

5) Productivity trends in the rural sector

'The Council has accepted the contention that productivity growth in the rural sector is slowing in both Australia and overseas.

However, while trend productivity growth may have been declining in some other countries, it is far from clear that it is the case in Australia.'

6) Target setting matters

'The Commission likewise would encourage the Council to reconsider its position on broad 'outcome-related' targets. Specifically, the Council has proposed that investment in rural R&D be increased so as to 'double rural sector output over the next 30 years while consuming proportionately fewer resources'. Also, it has suggested that evidence of a reduction in public expenditure on rural RD&E as a percentage of the size of the rural sector 'is of great concern if Australia wishes to remain a globally competitive producer of rural products. More importantly:

In regard to the first of these targets, it is not apparent what considerations have led the Council to opt for a doubling of sectoral output over a 30 year timeframe.' The targets seem to have been set from a rural-centric view of the world, without regard to the alternative opportunities that there would be to gainfully employ research resources and the land, labour and capital involved in producing the output concerned.

The linkage of the output target to increased investment in R&D leaves the impression that research is all that matters in examining how to improve the rural sector's economic, environmental and social performance.'

7) Workforce capacity

'... the Commission concurs with the Council on the need to underpin rural research capacities with high quality education and training systems.

However, the Council's call for the Australian Government to 'reinvigorate' the rural research workforce seems to be premised on the proposition that government action to address current workforce challenges can and should be pursued on a sector-specific basis.'

8) Performance evaluation

'...the Commission has some concerns about the focus of the Council's draft proposal for a 'high level' system-wide evaluation process. In particular, in concentrating on outcomes and capacities, it does not seek to identify how government funding and other policy intervention is making a difference to those outcomes and capacities. As such, it is unclear that the results of such an evaluation process would be particularly helpful in indicating how government policies might be modified to deliver better results in the future.'

UPDATE ON MYRTLE RUST IN AUSTRALIA

On March 8 DAFF provided the following update on the situation concerning this new plant disease in Australia.

The Myrtle rust Coordination Group met on 8 February 2011 and 23 February 2011 to consider further actions to respond to Myrtle rust (*Uredo rangelii*) following ongoing detections of this plant disease in New South Wales and Queensland.

Myrtle rust is a disease that affects the Myrtaceae family of plants, which includes many Australian native species including Eucalyptus. Myrtle rust was first detected in Australia on the Central Coast of New South Wales in April 2010. Analysis of the detections in state forests and nature reserves suggests that the disease may have been present in Australia for at least two years prior to detection.

The fungus that causes Myrtle rust has not been found before in Australia. It belongs to a group of fungi known as the 'eucalyptus/guava rust complex'. This complex is native to South America and is also present in the United States of America (Florida and Hawaii) and Mexico. It is not known how Myrtle rust entered Australia. Rust fungi produce microscopic spores which are carried by wind, on infected plants and as contaminants on other items such as people's clothing, or on traded goods that are transported around the world.

On 22 December 2010 it was agreed that it is not technically feasible to eradicate Myrtle rust and impractical to contain the disease from spreading further. This decision was based on our understanding of the behaviour of the disease, its increasing host range and its spread beyond the New South Wales Central Coast to a large number of domestic, commercial, public and recreational sites.

Due to the potential for Myrtle rust to have an ongoing impact on the natural environment, the community and potentially affected industries, ongoing arrangements to nationally coordinate projects or direct actions to manage the disease are being put in place.

The Myrtle rust Coordination Group, chaired by the Commonwealth, with technical and policy input to be provided by primary industries and environmental agencies within each jurisdiction, relevant non-government organizations and affected industries has been established.

Members of the Myrtle rust Coordination Group include representatives of the Australian Government Departments of Agriculture, Fisheries and Forestry and Sustainability, Environment, Water, Population and Communities, representatives of state and territory primary industries and environment departments, Plant Health Australia, A3P, Nursery and Garden Industry Australia, the Institute of Foresters of Australia, the Australasian Plant Pathology Society and the National Association of Forest Industries, RIRDC, New Rural Industries Australia, and Australian Tea Tree Industry Association and Wildflowers Australia. Representatives of other non-government organisations have also been asked to contribute their skills and expertise.

The Myrtle rust Coordination Group is considering and coordinating ongoing actions to respond to Myrtle rust focusing on mitigating its impact on the natural environment, including threatened and endangered species and industries that rely on Myrtaceae.

These actions include education and awareness, activities for slowing the spread of the disease collation and analysis of information about the behaviour of the disease and its impacts on natural ecosystems.

Source ; www.daff.gov.au/aqis/quarantine/pests-diseases/myrtle-rust/myrtle-rust80311

ASIAN HONEY BEE IN CAIRNS ERADICATION

On February 2 DAFF provided the following update on the situation concerning this new insect pest in Australia.

The Asian Honeybee National Management Group (AHB NMG) met on 31 January 2011 to consider advice provided by the Consultative Committee on Emergency Plant Pests on the Asian honeybee (*Apis cerana*) incursion in North Queensland on whether it continued to be technically feasible or not to eradicate the Asian honeybee. The AHB NMG view is that it is no longer technically feasible to achieve eradication although consensus was not reached.

The Asian honeybee is an invasive species which adversely impacts populations of European honeybees by competing for floral resources, robbing managed hives and transmitting disease. It is a natural host for varroa mite *jacobsonii* - a parasite that attacks developing bee larvae or adult bees.

Following the first detection of an Asian honeybee nest near Cairns in May 2007, a nationally cost-shared program aimed at eradication was implemented, led by the Queensland Government and overseen by the AHB NMG. Since that time, over 342 swarms or nests have been found and destroyed. None of the nests destroyed to date have carried any exotic mites of concern such as varroa, tropilaelaps or tracheal.

Activities to eradicate Asian honeybees in the Cairns region have been funded by the Australian Government, State and Territory Governments and the Australian Honey Bee Industry Council (AHBIC) on behalf of its members at a cost of approximately \$3 million. Other industries reliant on bees and bee pollination services were approached at peak representative level to be involved in the management of the response but declined to contribute resources.

The AHB NMG's decision, that it is no longer technically feasible to eradicate Asian honeybees, is based on a number of factors including:

- the tendency for the bees to swarm;
- the bee breeds rapidly and can travel long distances, particularly with assisted movement on vehicles and trains; and
- limitations of current surveillance methods which makes it difficult to locate all nests and destroy them.

The AHB NMG agreed to recommend continued funding for residual activities being carried out under the current program until 31 March 2011

Source: http://www.daff.gov.au/about/media-centre/communiques/update_on_response_to_asian_honeybees

NORTHERN NSW REGION REPORT

Dr Paul Kristiansen

"Current horticultural science activities on the Northern NSW region"

A wide range of projects at the University of New England are in progress or were recently completed. An Honours project evaluating the use of special calcium fertilisers formulations for control of blossom end rot (BER) in tomatoes is almost completed. This project has found that Ca was not limiting in the soils used (from Goulbourn Valley) and that the main cause of BER was elevated humidity in the

glasshouse. A Masters project evaluating the effect of compost tea on lettuce and bok choy growth is almost completed with data analysis still underway. Preliminary indications are that the effects of the compost tea were similar to equivalent applications of mineral fertilisers. Another project is evaluating the effect of seaweed fertilisers on peas, lettuce and radish growth is underway. This work has involved developing a bioassay for comparing the effect of seaweed fertilisers (and other biofertilisers potentially) with the effects of common plant growth regulators. It is continuing with a series of pot trials growing lettuce, field peas and radish in optimal and water- and temperature-stressed conditions.

A PhD project is underway looking at soil carbon cycling in vegetable production systems. The project includes soil surveys of vegetable farms in Gatton and Stanthorpe, field trials of corn-cabbage rotations in Armidale and soil incubation trials. A key question in this research relates to the role of carbon-based organic inputs in ameliorating the negative impacts of tillage that is common in vegetable production. Lisa McFadyen from NSW I&I in Alstonville is well into her PhD (through UNE) on macadamia canopy management, with several industry reports and thesis chapters written and the bulk of the field work completed. Finally, a HAL-funded national review of weed control methods in cucurbit crops has just commenced.

ICT International, an Armidale-based company, has been in carrying out intensive R&D to deliver state of the art technology in plant and soil scientific monitoring instruments. In 2010, ICT International released its new sap flow meter and stem psychrometer that measures the water status of plants. collaborative research has been carried out with Dr Nigel Warwick, Lecturer in Plant Physiology at UNE and Prof Kathy Steppe and Dr Dirk de Pauw from Ghent University in Belgium. ICT International has released a range of self contained, stand-alone instruments that can support various sensors including soil moisture, salinity, dendrometers and canopy ceptometers. In conjunction with ICT International web-based controller, sap flow, psychrometer and VSL instruments can be started or stopped remotely via web or SMS commands. Wireless communication to a central data logger allows sensor to sensor communication so that real-time, precision onsite decisions can be made without subjective human input. The ability to make precise and scientifically determined decisions on farm management is particularly important given the current passionate debate on irrigation in the Murray-Darling Basin.

Justine Cox from NSW I&I at Alstonville reports on a couple of projects she is involved with in the Northern Rivers area. A comparison of plastic woven weedmat with woodchip for mulching in blueberry production has shown that woodchip mulch has improved soil properties over time, including reduced compaction, and increased soil carbon, soil moisture and plant size while also increasing berry yield by up to 81% on some soil types. Woodchip mulch reduced daily soil temperature fluctuations significantly and reduced the high summer maximums measured under black plastic. The soil pH under woodchip mulch reduced to a level too acidic for blueberry plants however and lime was required to rectify this. The final report to HAL was submitted in September 2009, and a new project assessing the effects of biochar in blueberries was due to begin in December 2010. A five year study on soil erosion in macadamia orchards was completed in March 2010. The project comprised of several components, including assessing the sources and quantity of soil movement in orchards, evaluating a potential soil return/restoration technology and surveying attitudes and level of action undertaking soil erosion control measures in the industry. While harvest machinery directly disturbed topsoil in its actions and contributed to 1.3 - 2.5 t/ha/year, it was surprising to find that the consequences of stemflow (water concentrated down the tree trunks due to rain) was much higher at 3.8 t/ha/year even though the soil loss was highly focused around each tree base. Both actions moved significant topsoil in the orchard which then is more vulnerable to further movement downslope when the typical sub tropical storm season provides high intensity rainfall. The soil return technology was successful in reshaping the orchard to a more useful topography for water management, however due to the influence of stemflow, the erosive process will still continue, making this approach not successful for the long term. It is recommended to the industry that a type of soil cover is used in the tree rows to protect the soil surface, such as mulch or compost.

For further details please contact Dr Paul Kristiansen, 02 6773-2962, paul.kristiansen@une.edu.au

GRADUATE EMPLOYMENT AT DAFF

Applications for the 2012 Graduate Development Program close 27 April 2011.

UPCOMING ISHS MEETINGS

May 8-12, 2011, Volterra (Italy): **VIII International Workshop on Sap Flow**. www.sapflow8th.sssup.it

May 15-19, 2011, Puebla (Mexico): **II International Symposium on Soilless Culture and Hydroponics**. www.soillessculture.org

May 15-19, 2011, Alnarp (Sweden): **I International Symposium on Microbial Horticulture**. www.ishs-microhort.com

May 16-19, 2011, Fukuoka (Japan): **VI International Symposium on Edible Alliaceae**. www2.convention.co.jp/isea2011

May 23-26, 2011, Wenatchee, WA (United States of America): **IV International Conference Postharvest Unlimited 2011**. www.postharvestunlimited2011.org

June 5-10, 2011, Neos Marmaras-Sithonia, Chalkidiki (Greece): **International Symposium on Advanced Technologies and Management towards Sustainable Greenhouse Ecosystems - Greensys2011**. www.greensys2011.com

June 13-17, 2011, Quebec City (Canada): **International Symposium on Responsible Peatland Management and Growing Media Production**. www.peatlands2011.ulaval.ca

June 15-19, 2011, (Turkey): **I International Mulberry Symposium**.

June 19-23, 2011, Saint-Jean-sur-Richelieu (Canada): **IX International Symposium on Modelling in Fruit Research and Orchard Management**.

June 20-24, 2011, Yerevan (Armenia): **XV International Symposium on Apricot Breeding and Culture**. www.apricot2011.com

June 21-23, 2011, Lucknow (India): **Global Conference on Augmenting Production and Utilization of Mango: Biotic and Abiotic Stresses**.

June 22-26, 2011, Zlatibor (Serbia): **X International Rubus and Ribes Symposium**. www.x-rubusribes.agrif.bg.ac.rs

June 27 - July 1, 2011, Kuala Lumpur (Malaysia): **II International Symposium on Underutilized Plants: Crops for the Future - Beyond Food Security**. www.cffsymposium2011.org

June 29 - July 3, 2011, Nanjing (China): **III International Conference on Landscape and Urban Horticulture**. www.luh2011.org/

June 29 - July 3, 2011, Nanjing (China): **III International Conference on Landscape and Urban Horticulture**. <http://www.luh2011.org>

July 4-7, 2011, Wisley (United Kingdom): **I International Trials Conference: Assessment of Ornamental Plants**. <http://www.rhs.org.uk/Plants/ornamentals2011.asp>

July 6-9, 2011, Saas-Fee (Switzerland): **I International Symposium on Medicinal, Aromatic and Nutraceutical Plants from Mountainous Areas**. <http://www.agroscope.admin.ch/mapmountain>

July 17-21, 2011, Torino (Italy): **II International Conference on Quality Management of Fresh Cut Produce: Convenience Food for a Tasteful Life**. <http://www.freshcut2011.org>

August 17-19, 2011, Flores, Petén (Guatemala): **International Symposium on Medicinal and Aromatic Plants; History of Mayan Ethnopharmacology**. <http://www.imaps2011-peten.org/>

September 3-7, 2011, Xinzheng, Henan (China): **II International Jujube Symposium**. September 5-7, 2011, Pitesti (Romania): **II Balkan Symposium on Fruit Growing**. <http://bsfg2011.icdp.ro>

September 10-12, 2011, Damghan (Iran): **I International Symposium on Mycotoxins in Nuts and Dried Fruits.** <http://www.mycotoxinsymp.com>

September 11-15, 2011, Warsaw (Poland): **XIII Eucarpia Symposium on Fruit Breeding and Genetics**<http://www.eucarpia2011.woiak.sggw.pl>

September 11-15, 2011, Nelspruit (South Africa): **II ISHS Genetically Modified Organisms in Horticulture Symposium: Paving the Way for a Sustainable Future.** <http://www.gmo2011.co.za>

September 17-19, 2011, Tunis (Tunisia): **I International Symposium on Cassava Market and Economy.**

September 18-22, 2011, Ghent (Belgium): **VII International Symposium on In Vitro Culture and Horticultural Breeding: IVCHB**<http://www.ivchb2011.ugent.be/>

October 9-12, 2011, Tirana (Albania): **V Balkan Symposium on Vegetables and Potatoes.** <http://5bsvp.ubt.edu.al/>

October 10-12, 2011, Zürich (Switzerland): **I International Workshop on Bacterial Diseases of Stone Fruits and Nuts.**

October 10-14, 2011, Salvador (Bahia) (Brazil): **International ISHS-ProMusa Symposium - ProMusa 2011.** <http://www.gt5.com.br/promusa/>

October 16-19, 2011, University Park, PA (United States of America): **International Symposium on High Tunnel Horticultural Crop Protection.** <http://horticulture.psu.edu/cms/ishs2011/>

October 16-22, 2011, Nebraska City, NE (United States of America): **V International Symposium on Acclimatization and Establishment of Micropropagated Plants.** <http://agronomy.unl.edu/isaemp-2011>

October 17-21, 2011, Barcelona (Spain): **International Symposium on Growing Media, Composting and Substrate Analysis**<http://www.upc.edu/growingmediacomposting2011>

November 3-4, 2011, Launceston, Tasmania (Australia): **International Symposium on Pyrethrum, The Natural Insecticide: Scientific and Industrial Developments in the Renewal of a Traditional Industry.** http://www.ishs.org/calendar/pyrethrum_2011.pdf

November 15-18, 2011, Chiang Mai (Thailand): **International Symposium on Medicinal and Aromatic Plants - Royal Flora 2011.** http://www.royalflora2011.com/index_eng.html

November 22-25, 2011, Buenos Aires (Argentina): **VII International Symposium on New Floricultural Crops.** <http://www.inta.gov.ar/floricultura/newornamentals2011/index.asp>

November 24-27, 2011, Chiang Mai (Thailand): **III International Symposium on Papaya - Royal Flora 2011**http://www.royalflora2011.com/index_eng.html

November 27-30, 2011, Tel Aviv (Israel): **II International Mandarin Symposium.**

November 29 - December 2, 2011, Chiang Mai (Thailand): **International Symposium on Tropical and Subtropical Fruits - Royal Flora 2011.** http://www.royalflora2011.com/index_eng.html

December 3-6, 2011, Bangkok (Thailand): **International Conference on Quality Management in Supply Chains of Ornamentals (QMSCO 2011).** <http://www.kmutt.ac.th/QMSCO2011/>

December 3-6, 2011, Bangkok (Thailand): **Asia Pacific Symposium on Postharvest Quality Management of Root and Tuber Crops**

December 3-6, 2011, Bangkok (Thailand): **I International Symposium on Postharvest Pest and Disease Management in Exporting Horticultural Crops.** <http://www.kmutt.ac.th/ppdm2011/>

December 3-6, 2011, Bangkok (Thailand): **Southeast Asia Symposium on Quality Management in Postharvest Systems (SEAsia2011)**<http://www.kmutt.ac.th/SEAsia2011>

December 9-12, 2011, Madurai (India): **I International Symposium on Cashew Nut.** <http://www.cashewnut2011.co.cc/>

December 19-22, 2011, Giza (Egypt): **V International Symposium on Vegetable Nutrition and Fertilization: Vegetable Farms Management Strategies for Eco-Sustainable Development.** http://www.ishs.org/calendar/5VNFsymp_1announcement.pdf

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