Food Security from Sustainable Agriculture

Programme
15-18 November 2010

Lincoln University, New Zealand
The organising committee acknowledges the outstanding support of the following sponsors:

**Premium Sponsors**

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Cover Slides by W.R. Scott
Welcome

We’ve moved heaven and earth, well at least shaken the earth - to ensure you will have a once-in-a-lifetime experience at this year’s joint conference on “Food Security from Sustainable Agriculture.” It is my pleasure and privilege to welcome you all, on behalf of the four organising societies, to Lincoln University as you seek new knowledge and connect with old friends from over 15 countries at this unique agricultural event. On behalf of my local organizing committee I offer you the chance to see the region’s major agricultural practices and engage in the debates over resource allocation and land-use intensification that confront agriculture the world over. These major issues require agronomy and agricultural research as central to their solution. Feeding an ever-expanding population, with fewer resources and reduced environmental footprints, mitigating climate change and reducing poverty through food security are fundamental issues that transcend continents and cultures. Collectively they are our responsibility as agricultural professionals. Take this opportunity to examine and become informed about the big picture issues framed within your own context over the next four days.

On Monday our plenary speakers will set this global scene and contrast agricultural issues between Australia and New Zealand before we break out into an intensive series of concurrent sessions. With a diverse range of topics covered each day your selection of session will be a real challenge. I urge you to enjoy the diversity of topics that the conference offers, listen to speakers outside your normal discipline and embrace the complexity and stimulation that surrounds our industry. On Tuesday global resources are to the fore, and the first of our knowledge transfer workshops will explore practical issues in more depth, before we view the local Lincoln research facilities. Wednesday focuses on the Canterbury region with farm visits so make sure sun hats and raincoats are in your back pack as you explore the land, water and farming issues for the day. For Thursday we take a look back and a look forward to see what the future might hold and how our actions might affect generations to come.

Throughout your time here, our conference organizing team, the Professional Development Group, will be pleased to answer any logistics questions you may have and they will be stationed at the registration desk throughout the week. I thank them and my local organizing committee as well as each association’s executives for their input to assist in the preparation of this year’s event.

Finally my personal challenge to all of you over 40 - adopt a post-graduate student! We have many students attending the conference from all over the world, make them feel welcome, make a conscious effort to talk to someone under 30 whom you don’t know, reconnect throughout the event to discuss each key messages they are getting - you may just find that Generation Y are ready to take up the challenges of their generation. After it all I hope you’ve had an exciting, earth-movingly memorable experience by which to remember Conference 2010.

Best wishes

Dr Derrick Moot
Professor Plant Science, Lincoln University
Chair, Conference Organising Committee
Organising Committee

**New Zealand**
- Derrick Moot, Lincoln University (Chair)
- Rob Craigie, Foundation for Arable Research
- Dawn Dalley, DairyNZ
- John de Ruiter, Plant & Food Research Ltd
- Robyn Dynes, AgResearch
- Grant Edwards, Lincoln University
- Patricia Fraser, Plant & Food Research Ltd
- Richard Green, The Greenvale Group
- Allan Hewitt, Landcare Research
- Bruce McKenzie, Lincoln University
- Jeff Morton, Ballance
- Derek Wilson, Plant & Food Research Ltd

**Australia**
- Dr. John Angus, President, CSIRO Plant Industry
- Dr. John Kirkegaard, Vice President and Program Chair, CSIRO Plant Industry
- Dr. Mark Norton, Secretary, NSW Industry & Investment
- Dr. Walter Kelman, Assistant Secretary, CSIRO Plant Industry
- Dr. Andrew Moore, Co-treasurer, CSIRO Plant Industry
- Dr. Jim Wallcott, Co-treasurer, Department of Agriculture, Fisheries & Forestry
- Dr. Hugh Dove, Co-editor, CSIRO Plant Industry
- Dr. Richard Culvenor, Co-editor, CSIRO Plant Industry
- Dr. Julianne Lilley, Membership, CSIRO Plant Industry
- Mr. Greg Fraser, Sponsorship, Plant Health Australia
- Dr. Mark Peoples, Sponsorship, CSIRO Plant Industry
- Dr. Richard Simpson, Awards, CSIRO Plant Industry
- Professor Len Wade, Committee, Charles Sturt University
- Professor Bill Bellotti, Immediate Past President, University of Western Sydney
Information for Delegates

Registration Desk
Please contact the registration desk for any information and assistance needed.
The Registration Desk is located in the foyer of the Exhibition Hall. The Registration Desk will be open at the following times:

<table>
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<tr>
<th>Date</th>
<th>Time</th>
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<tbody>
<tr>
<td>Sunday 14 November</td>
<td>3.00 pm - 7.00 pm</td>
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<tr>
<td>Monday 15 November</td>
<td>7.15 am - 5.00 pm</td>
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<td>Tuesday 16 November</td>
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<td>Wednesday 17 November</td>
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<td>Thursday 18 November</td>
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Speaker Instructions
All speakers are asked to ensure their presentation is loaded at least 24 hours before their allocated session times - those for Monday will be able to load on Sunday afternoon. Loading will occur at a central location in Gillespie Hall (where the plenary sessions will be held).

Your session chair will make contact with you prior to your presentation so please provide them with a 2-3 line biography before the event. The conference will run strictly to time. To avoid the embarrassment of being interrupted please ensure you have practiced your presentation and can keep to time. It is important that all speakers keep to time so that delegates have an opportunity to move between concurrent sessions during the question time. These are physically separated across the campus. Your Room allocation for speaking will be confirmed at registration.

Oral presentations 15 minutes slot
8-10 minutes of speaking with a bell at 8 minutes as a two minute warning.
2-3 minutes of questions
1-2 minutes of changeover to enable delegates and speakers to change rooms
Suggest 8-12 slides depending on content.

Thumbnail 5 minute slot - usually 3 thumbnails in a group so the time slot matches with oral presentations
3 minutes of speaking - no questions
1 minute for change over
Should time allow at the end of a group of thumbnails the chairman may allow questions to the speakers. 3 slides with no animation are allowable (inclusive of the title slide).

Posters (A0)
To be on view throughout the conference with a dedicated session on Thursday after morning tea. Posters will be displayed in the Exhibition Hall (lunch and sponsors venue). Velcro etc will be available at the venue.

Field Trips
Coaches will depart for Field Trips outside the Accommodation Office on Calder Drive. Please bring your allocated Field Trip ticket on Wednesday.

Please obey all health and safety instructions on Field Trips.

Earthquake Instructions
in the event of an earthquake - Drop, Cover, Hold. Do not panic.

Mobile Phones & Pagers
As a courtesy to speakers and other delegates, please ensure that all mobile phones and pagers are switched off during the conference sessions.

Taxis
Blue Star Taxis 03 379 9799
First Direct Taxis 03 377 5555
Gold Band Taxis 03 379 5795
Lincoln Shuttle 027 231 0397 or 03 325 2341
Selwyn Shuttle 0508 735 996

Parking
Parking is available in the carparks at Lincoln University.

Dress Code
The standard of dress for the conference is tidy casual.

Disclaimer
All information provided is correct at the time of printing. The Conference Organisers reserve the right to make changes to the programme as necessary.

Liability
In the event of circumstances beyond the control of the conference organisers, no responsibility will be accepted for any losses incurred.
Name Badges
Name badges should be worn at all times during the conference as they are required for entry to all conference sessions, social functions and the exhibition area. Your name badge is in your registration envelope.

Valuables
Please keep all valuables safe. The organisers of the Conference cannot be held responsible for any loss or damage of personal items while attending. Any found property should be taken to the Registration Desk.

Special Diets
Delegates with special dietary requirements who have advised the Conference Secretariat via their registration form must make themselves known to the serving staff at all refreshment breaks and functions. Delegates who have not previously advised of special dietary requirements should advise the staff at the Registration Desk immediately so that arrangements can be made.

Internet Access
Lincoln Hotspot Wireless Network
Free Wireless access to the Internet and selected Lincoln resources is available throughout the Library, at Mrs O’s, outside H11/12 and anywhere else you see the LincolnHotspot sign. The network is open access requiring no special security settings and is the sort of network you would find in a coffee shop or other commercial wireless hotspot. This makes it easy to connect, just look for the LincolnHotspot network on your list of wireless networks when you are in range.

Important: as it is an open wireless network you need to make sure you take the same security precautions as you would on the Internet. These include:

- you have a personal firewall switched on;
- leaving the wireless connection switched off until you actually need it; - safer that way and also saves battery life
- taking care when opening attachments from people you don’t know and
- not accepting any digital certificates you may be presented with when browsing a supposedly trusted site like a bank – it could be a phishing attack or a man in the middle attack
- you can also use EDUcation ROAMing (EDUROAM)

Social Programme

Early registration & Welcome Reception
sponsored by

GRDC Grains Research & Development Corporation

Sunday 14 November 2010, 6.30pm
Venue: Exhibition Hall
Dress: Smart casual

Conference dinner
sponsored by

agresearch

Tuesday 16 November, 7 pm - midnight
Venue: Christchurch Convention Centre
Dress: Your best

The conference dinner will provide a time to unwind and gather with your peers to enjoy a wonderful night filled with good quality food, fine wine and great entertainment.
### Monday 15 November 2010

**8.15-10.15am**

**PLENARY SESSION**  
**Theme:** Food security, climate change and research  
**Chair:** Professor Derrick Moot (Lincoln University)  
**Sponsor:**

- Can we feed the World in 2050  
  Presenter: Dr Greg Edmeades, Cambridge (NZ), previously CIMMYT, Mexico  
  Supported by New Zealand Grassland Trust

- Agricultural productivity in Australia and New Zealand: trends, constraints and opportunities  
  Presenter: Dr Michael Robertson, CSIRO Sustainable Ecosystems, Perth

- Maintaining Support for Agricultural R&D  
  Presenter: Professor John Mullen, Charles Sturt University, Orange  
  Supported by Foundation for Arable Research

**10.15-10.45am**  
**Morning Tea**  
**Venue:** Concurrent session venues

**10.45-12.15pm**

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| 10.45 | Commerce 1 | Oral - Seasonal rainfall forecasts as an adaptation strategy for climate change.  
Senthold Asseng (Peter McIntosh) |
| 11.00 | Commerce 2 | Oral - Balancing soil carbon quality and quantity for sustainable agriculture.  
Graeme Blair (Nelly Blair) |
| 11.00 | Commerce 2 | Oral - Year round taro leaf production in northern New Zealand.  
Bill Bussell |
| 11.00 | Commerce 2 | Oral - Explaining variability in soil carbon stocks based on farm management factors.  
Erin Lawrence |
| 11.15 | Hilgendorf 1 | Oral - Using spatial and temporal analogues to consider impacts and adaptation to climate change in the South Australian grain belt.  
Peter Hayman |
| 11.30 | Hilgendorf 1 | Oral - Model simulations of carbon storage and fluxes in native perennial vegetation and temperate grass-based pastures.  
Ian Johnson |
| 11.30 | Hilgendorf 1 | Oral - Does my potato crop need fertiliser?  
A modeling approach.  
Jeff Reid |
| 11.45 | Stewart 1 | Oral - Projected impact of climate change on Tasmanian dryland pasture production.  
David Parsons |
| 11.45 | Stewart 2 | Oral - Impact of landuse on profile distribution of fine root biomass in NSW, Australia.  
Gregon Olupot |
| 11.45 | Hilgendorf 1 | Oral - Water and nitrogen use efficiency in modern and Maori potato cultivars.  
Isaac R. Fandika |
| 11.45 | Commerce 1 | Oral - Can desiccant application improve carrot seed quality?  
Rajan Trivedi |
| 12.00 | Commerce 1 | Oral - Will stubble management and stubble load affect soil organic carbon under cropping in the high rainfall zone of Victoria?  
Penny Riffkin |
| 12.00 | Commerce 2 | Oral - Is there any potential risk of consuming home-produced vegetables irrigated with a mixture of waste water and sludge in Lesotho?  
Adesola Olutayo Olaleye |

**12.15 - 2.00pm**  
**Lunch**  
**Venue:** Exhibition Hall
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**Crop Production – Integrated Weed Management**

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**Crop Production – Plant Density**

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**Pasture Production – Legumes and Broadleaves**

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**Programme**

(Per 12:00 pm)

Please note that not all sessions conclude at the same time, to assist with logistics associated with catering and transport.

**LEGEND to locate papers in Abstract Books**

Australian Society of Agronomy
New Zealand Grassland Association
New Zealand Society of Agronomy

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**Crop Production – Integrated Weed Management**

- **Oral**
  - The economic benefits of glyphosate tolerant canola in controlling annual ryegrass (*Lolium rigidum*), Ross Kingwell
  - Evaluation of an integrated weed management package for soybean, Kalpana Renganatham
  - Low input weed management in field peas, Zac Munakamwe (George Hill)
  - Stability of competitive ability in wheat genotypes across different weed species, Michael Zerner
  - Barley grass, an emerging weed threat in southern Australian cropping systems, Ben Fleet
  - Density dependent interference of *Zmex australis* in wheat at different sowing times, Rana Nadeem Abbas

**Crop Production – Plant Density**

- **Oral**
  - Patterns of dry matter accumulation and grain yield of three corn hybrids under varying planting density, Khaliq Abdul (James Fisher)
  - Agro-physiological traits and dry matter accumulation of corn grown under varying row and plant spacing, Mazoor Ahmed
  - Yield response of kabuli and desi chickpea (*Cicer anetnunum L.*) genotypes to changes in row spacing, Gurjeet Gill
  - The impact of row spacing on the growth and yield of lentil cultivars in southern Australia, Jason Brand
  - Determining physiological cut-out in Ultra Narrow Row cotton systems, Rose Brodrick

**Pasture Production – Legumes and Broadleaves**

- **Oral**
  - Nitrogen fixation by subterranean and white clovers in dryland cocksfoot pastures, Dick Lucas
  - Estimated symbiotic N2 fixation by annual legume species, Rose Brodrick
  - Vegetative and reproductive development of balansa clover, David Monks
  - Annual herbage production increased 40% when subterranean clover was over-drilled into grass-dominant dryland pastures, Serkan Ates (Derrick Moot)
  - Effect of stocking rate on DM production, sward structure, sward morphology and tiller density throughout the whole growing season, Gonzalo Tunon
  - Estimated symbiotic N2 fixation by annual legume and lucerne pastures on two vertisols, Margaret Raeside

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**Sponsor:**

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**2.00-3.15pm**

**Climate Change – CO₂**

Chair: Dr Penny Riffkin

- **Oral** - Future effects of elevated CO₂ on dryland wheat production – an overview of FACE research in Victoria, Australia. Glenn Fitzgerald
- **Oral** - The size of free air carbon dioxide enrichment (FACE) rings affects overall system performance: An Australian experience. Mahabubur Mollah
- **Oral** - Intraspecific variation of growth and yield response of wheat to elevated CO₂ in Australian Grains Free Air Carbon dioxide Enrichment (AGFACE). Saman Seneweera
- **Oral** - N dynamics for wheat grown under elevated carbon dioxide in the Australian Grains FACE. Robert Norton
- **Oral** - Modelling the growth and grain yield response of wheat crops under Free Air Carbon Dioxide Enrichment at Horsham and throughout Victoria, Australia. Garry O'Leary

**Crop Production – Subsoil Constraints**

Chair: Prof David Herridge

- **Oral** - Removal of a subsoil constraint - When does it pay? Imma Farre
- **Oral** - On-farm assessment of sub-soil salinity and sodicity constraints to faba bean and barley production in areas of Southern Australia. Ehsan Tavakkoli
- **Oral** - Lime increased available soil water in a strongly acidic soil on the Tablelands, New South Wales. Richard Hayes
- **Oral** - Using raised beds to reduce waterlogging of pastures - impact on runoff and soils. Graeme Ward
- **Oral** - Understanding the key drivers of lucerne adoption in New South Wales, Australia. Richard Hayes (Deb Slinger)

**Energy Balance and Resource Use in Farming**

Chair: Professor Jacqueline Rowarth

- **Oral** - Removal of a subsoil constraint - When does it pay? Imma Farre
- **Oral** - On-farm assessment of sub-soil salinity and sodicity constraints to faba bean and barley production in areas of Southern Australia. Ehsan Tavakkoli
- **Oral** - Energy return on investment for dairy and sheep/beef farms under conventional, integrated or organic management. Solis Norton
- **Oral** - Using Life Cycle Assessment (LCA) to assess water use in tomato production. Girija Pujge
- **Oral** - On farm participatory research investigating factors limiting the use of perennial pastures in mixed farming enterprises. Mark Peoples
- **Oral** - Improvement of lucerne production under dryland conditions in the Victorian Mallee. Richard Hayes (Deb Slinger)

3.15-3.45pm

**Afternoon Tea**

Venue: Concurrent session venues

3.45-4.45pm

**Climate Change – High Temperature**

Chair: Dr Penny Riffkin

- **Oral** - Characterising the risk of heat stress on wheat: meteorology, climatology and the design of a field heating chamber. Bronya Alexander
- **Oral** - Effects of elevated CO₂ and irrigation on gas exchange and water relations among two wheat genotypes. Sabine Posch
- **Oral** - Increased risk of hay-off in wheat crops from climate change. James Nuttall (Garry O'Leary)
- **Oral** - Impact of high temperature on reproductive stage of chickpea. Viola Devasirvatham

**Lucerne Systems**

Chair: Dr Dr Andrew Moore

- **Oral** - Farmers’ experience with lucerne in Western Australia. Perry Dolling (Roger Wilkinson)
- **Oral** - Farmers’ experience with lucerne in Western Australia. Perry Dolling (Roger Wilkinson)
- **Oral** - Forage shrub plantings by crop-livestock enterprises. Emmanuel Chakwizira

**Participatory Research, Extension and Teaching**

Chair: Dr Peter Carberry

- **Oral** - On-farm participatory research investigating factors limiting the use of perennial pastures in mixed farming enterprises. Mark Peoples
- **Oral** - Proofing Participatory Research. Huub Kerckhoffs
- **Oral** - Two levels of information are required to assist extension of liming in Western Australia. James Fisher
- **Oral** - The development and delivery of a new Diploma of Agronomy course. Nick Wachsmann

5.00-6.00pm

**NZGA Annual General Meeting (Venue: C 1)**

**ASA Annual General Meeting (Venue: C 2)**

**NZAS Annual General Meeting (Venue: C 6)**
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<td>Crop Production – Crop &amp; Pasture Sequence Decisions</td>
<td>Dr Mark Peoples</td>
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<td>Forage Crops – Brassicas</td>
<td>Assoc Prof George Hill</td>
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<td>Animal Production and Feed Quality</td>
<td>Mr Warwick Lissaman</td>
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<td>Oral-Enhancing forage crop production and soil quality following municipal compost.</td>
<td>Craig Tregurtha</td>
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<td>Oral-Biofuel crops for anaerobic digestion grown on marginal lands. Scott Shaw (Hubb Kerchoffs)</td>
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<td>Oral-Predicting the soil supply of potassium to crops. Stephen Trolove</td>
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<td>Oral-Natural Silicon Fertilisers in North Queensland. Vladimir Matchenkov</td>
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<td>Oral-Do I have the required soil bioengineers? Alec Mackay</td>
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<td>Oral-Improving the reliability of early sown pulses in south-eastern Australia. Michael Lines</td>
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<td>Oral-A new highly virulent Blue-Green aphid causes severe damage in previously resistant pasture and grain legumes. Alan Humphries</td>
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<td>Oral-The importance of inoculant type or application rate in promoting pulse performance in cropping systems of south-eastern Australia. Matthew Denton</td>
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<td>Oral-Soil pH,exchangeable aluminium and lucerne yield responses to lime in a South Island high country soil. Jim Moir</td>
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<td>Oral-Measuring the impact of bacterial blight (Pseudomonas syringae pv. Syringae) on production of Australian field pea varieties. Eric Armstrong (Jason Brand)</td>
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<td>Oral-Nitrogen uptake and distribution in kale. Robert Zyskowski</td>
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<td>Oral-Drought response and water use efficiency of forage brassicas. Andrew Fletcher</td>
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<td></td>
<td>Oral-Growth, development and seed yield of autumn sown forage rape sown at different dates and sowing rates. Emmanuel Chaikwizira</td>
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<td></td>
<td>Oral-Management strategies for improving seed yield of forage rape (Brassica napus L.). Jason Trethewey</td>
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<td>Oral-Liveweight gain per head and per ha throughout the year of lambs grazing conventional pastures and those that switch from grass to clover. Alastair Nicol</td>
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<td>Oral-Feeding systems in summer dry environments for red deer in lactation. Dave Stevens</td>
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<td>Oral-Nutritive value of Australian native chenopods. Hayley Norman</td>
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<td></td>
<td>Oral-Bioactivity and practical use of plantain (Plantago lanceolata). Yoshifumi Tamura</td>
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<td></td>
<td>Oral-Performance of sheep grazing sullia (Hedysarum coronarium) based pastures in southern Australia. Carolyn de Koning (Alan Humphries)</td>
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<td></td>
<td>Oral-Development of white clover populations with higher concentrations of water soluble carbohydrate. Keith Widdup</td>
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</tbody>
</table>

**Venue: Concurrent session venues**

- **Crop Production – Soil Biology and Nutrition**
  - Hilgendorf 4
  - Stewart 2
  - Stewart 1

- **Crop Production – Legume Agronomy**
  - Hilgendorf 4
  - Stewart 2
  - Stewart 1

- **Pasture Production – Dryland Perennials**
  - Hilgendorf 4
  - Stewart 2
  - Stewart 1

- **Animal Production and Feed Quality**
  - Hilgendorf 4
  - Stewart 2
  - Stewart 1
Tuesday 16 November 2010

8.30-10.00am

PLENARY SESSION
Theme: Food security and sustainable resource use
Chair: Dr John Kirkegaard
Sponsor:

The efficient use of water resources for agriculture and horticulture
Presenter: Dr Brent Clothier, Plant and Food Research, Palmerston North

Increasing phosphorus efficiency in the shadow of peak phosphorus
Presenter: Professor Peter Cornish, University of Western Sydney, Hawkesbury
Supposed by AGMARDT

Greenhouse gas emissions and climate change impacts of the pasture system
Dr Harry Clark, NZ Agricultural Greenhouse Gas Research Centre, Palmerston North

10.00-10.30am
Morning Tea
Venue: Concurrent session venues

10.30-12.30pm

Venue: Commerce 1
Climate Change – Future Farming
Chair: Dr Peter Hayman
Sponsor:

- Oral - How might we secure the global food supply over the next 10,000 years?
  Jim Scott

- Oral - The search for alternative perennial pasture legumes adapted to the changing climatic conditions across Tasmania's low to medium rainfall region.
  Eric Hall

  Guangdi Li

11.00

- Oral - The evolving role of crop modelling in agronomy research.
  Michael Robertson

11.15

- Thumbnail - The response of three C4 grasses to elevated temperature and CO2 in the field.
  Mike Dodd

- Thumbnail - Mapping potential biofuel crops in the Victorian agricultural landscape.
  Mary-Jane Rogers

- Thumbnail - Insect-pathogen-crop dynamics and their importance to plant biosecurity under future climates: Barley yellow dwarf virus and wheat - a case study.
  Garry O'Leary

11.30

- Oral - Challenges for agronomists dealing with adaptation to climate change: questions resources...
  Peter Hayman

- Oral - The strengths and weaknesses associated with using industry data to obtain insight into agronomic processes in agricultural research.
  Roger Lawes

- Oral - The effect of stored soil water on grain crop yield and yield variability in north eastern Australian dryland cropping systems.
  Richard Routley

11.45

- Oral - Role of seed priming in improving the wheat performance in changing climate.
  Muhammad Farooq

- Thumbnail - Valuating the GRAZPLAN pasture model for native grasslands of the Monaro region.
  Andrew Moore

- Thumbnail - Developing grass curing algorithms for decision support tools.
  Helen Daily

- Thumbnail - Simulating perennial crops with the APSIM model - a modelling study with lucerne (Medicago sativa L.)
  Edmar Texiera

12.00

- Thumbnail - Using a participatory action research, development and extension (PARD&E) process to adapt grain production systems to a changing climate.
  Roger Armstrong

- Oral - Benchmarking wheat water-use efficiency in Tasmania.
  Shaun Lisson (Tina Acuna)

12.15

- Thumbnail - Benchmarking farm water use efficiency in eastern Australian dryland cropping systems.
  Richard Routley

- Thumbnail - Benefits of increased soil exploration by wheat roots.
  Julianne Lilley (John Kirkegaard)

- Thumbnail - Production, water use and water-use efficiency of short term ley legumes in Southern Queensland.
  Lindsay Bell

12.30-1.30pm
Lunch
Venue: Exhibition Hall
## Conference Programme

### Morning Session (10.00-10.30am)

**Venue: Stewart 2**

**Crop Production – N & P Use**

**Chair:** Mr Charlie Walker  
**Sponsor:**

<table>
<thead>
<tr>
<th>Oral</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus use efficiency in cereals</td>
<td>Glenn McDonald</td>
</tr>
<tr>
<td>The farm-gate phosphorus balance of sheep grazing systems maintained at three contrasting soil fertility levels.</td>
<td>Richard Simpson</td>
</tr>
<tr>
<td>Expanding the use of Diffusive Gradients in Thin-Films (DGT) for assessing phosphorus requirements of different crop types.</td>
<td>Sean Mason</td>
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<tr>
<td>Sulphur enhanced triple phosphate as a substitute for single superphosphate.</td>
<td>Graeme Blair</td>
</tr>
<tr>
<td>Seasonal changes in soil moisture has variable impact on soil nitrogen and phosphorus dynamics in the absence of a crop.</td>
<td>Roger Armstrong</td>
</tr>
<tr>
<td>Root system plasticity as a factor in crop breeding for improved nutrient uptake.</td>
<td>Jeff Reid</td>
</tr>
<tr>
<td>Annual ryegrass dry matter yield and nitrogen responses to soil N applications in southern Brazil farming systems.</td>
<td>Alexandre Varella</td>
</tr>
<tr>
<td>Screening drought resistance among a large number of Australian green couch grass (Cynodon spp.) ecotypes during canopy establishment.</td>
<td>Yi Zhou</td>
</tr>
<tr>
<td>The plant structures of Microlaena stipoides, a grass species forming stolons and rhizomes.</td>
<td>Meredith Mitchell</td>
</tr>
<tr>
<td>Effect of planting date and daylength on establishment of Dorycnium hirustum.</td>
<td>David Parsons</td>
</tr>
<tr>
<td>Comparison of functional components in high anthocyanin GM and non-GM rice.</td>
<td>Muhammad Farooq (Dong-Jin Lee)</td>
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</tbody>
</table>

### Pasture Production – Physiology & Breeding

**Chair:** Mr Graham Kerr  
**Sponsor:**

<table>
<thead>
<tr>
<th>Oral</th>
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<tbody>
<tr>
<td>Evaluation of semi-hybrid perennial ryegrass populations.</td>
<td>Brent Barrett</td>
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<tr>
<td>Time course of root initiation and development in perennial ryegrass - a new perspective.</td>
<td>Arif Robin</td>
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<tr>
<td>Perennial ryegrass regrowth after defoliation - Physiological and molecular changes.</td>
<td>Julia Lee</td>
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<tr>
<td>Genetic improvement of fibre traits in perennial ryegrass</td>
<td>Marty Faville</td>
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<tr>
<td>Effect of resource supply on interaction between foliar endophytic and root mycorrhizal fungi in perennial ryegrass.</td>
<td>Qianhe Liu</td>
</tr>
<tr>
<td>Assessment of root growth of perennial pasture grasses in acid soils using non-DNA-based methods.</td>
<td>Rebecca Haling</td>
</tr>
<tr>
<td>Splitting the clover genome: radical new clovers for agriculture.</td>
<td>Warren Williams</td>
</tr>
</tbody>
</table>

### Lunch (12.30-1.30pm)

**Venue: Exhibition Hall**

### Farmer Workshops (10.30-12.30pm)

**Venue: Hilgendorf 1**  
**Workshop 1:** Which Ryegrass should I really sow?  
**Facilitator:** Mr Tom Fraser  
**Expert:** Prof Grant Edwards  
**Sponsor:**

**Venue: Hilgendorf 2**  
**Workshop 2:** High efficiency of nutrient use will reduce losses to the environment  
**Facilitator:** Mr Warwick Catto  
**Expert:** Dr Arts Roberts  
**Sponsor:**

**Venue: Hilgendorf 3**  
**Workshop 3:** Better performance from feeding forage brassicas and beets  
**Facilitator:** Mr. Jonathan Davis  
**Expert:** Dr Glen Judson  
**Sponsor:**

**Venue: Hilgendorf 4**  
**Workshop 4:** Identification of insect pests in pastures and crops  
**Facilitator:** Dr Trevor Jackson  
**Expert:** Mr Richard Townsend  
**Sponsor:**
Wednesday 17 November 2010

**PLENARY SESSION**

Theme: Pre-Tour Symposium

Chair: Dr Derek Wilson (Plant & Food Research)

**Sponsor:**

**Venue:** Gillespie Hall

**8.30-10.00am**

- **Crop Production – Precision Agriculture (single session)**
  - Chair: Dr Martin Blumenthal
  - **Sponsor:**

- **Managing Nutrient Loss & Water Quality (double session – Part A)**
  - Chair: Dr Warren King
  - **Sponsor:**

- **Crop Production – Development and Herbicide Management (double session – Part A)**
  - Chair: Dr Rick Llewellyn
  - **Sponsor:**

**10.00-10.30am**

- **Morning Tea**

**10.30-12.30pm**

<table>
<thead>
<tr>
<th>Venue: Commerce 1</th>
<th>Venue: Commerce 2</th>
<th>Venue: Stewart 1</th>
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<tr>
<td><strong>Crop Production – Precision Agriculture (single session)</strong></td>
<td><strong>Managing Nutrient Loss &amp; Water Quality (double session – Part A)</strong></td>
<td><strong>Crop Production – Development and Herbicide Management (double session – Part A)</strong></td>
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<tr>
<td>Chair: Dr Martin Blumenthal</td>
<td>Chair: Dr Warren King</td>
<td>Chair: Dr Rick Llewellyn</td>
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- **10.30**
  - Oral-Precision agriculture tools and techniques for pasture and livestock systems. Mark Trotter
  - Oral-Opportunities to sustain “greener farming”: comparing impacts of water quality regulations in two catchments: Lake Taupo (NZ) and Tomales Bay, California (USA). Sheila Barry
  - Oral-Field evaluation of sensitivity of wheat to high temperature stress near flowering and early grain set. ASM Hasim Morshed Talukder

- **10.45**
  - Oral-Variable Rate Technology on Upper Eyre Peninsula. Cathy Paterson
  - Oral-Environmental and economical consequences of soil water repellency under pasture. Karin Muller
  - Oral-Cold tolerance screening for cotton cultivars using germination chill protocols. Daniel Tan

- **11.00**
  - Oral-Farmers Perception of the problems of VRT adoption in Western Australian. Roger Mandel
  - Oral-N-leaching in hill country: farmer led research. Anders Crofoot
  - Oral-Evaluation of the frost tolerance of elite varieties and other winter cereals at flowering. Craig Birchall

- **11.15**
  - Oral-Assessing the whole-farm benefits of Controlled Traffic technology. Ross Kingwell
  - Oral-Technology for natural water protection against pollution from cultivated areas. Vladimir Matcshenkov
  - Oral-Can planting date and variety selection improve resource-use efficiency of Australian cotton systems? Michael Braunack

- **11.30**
  - Oral-Crop Production – Dual Purpose Crops (single session)
    - Double Session - Part B
    - **Venue:** Concurrent session venues

- **12.00**
  - Oral-Interactions between plant density and grazing in cereals under dual-purpose management. Walter Kelman (Matthew Harrison)
  - Oral-Removing early spring emerged reproductive growing points enhances seed yield of Italian ryegrass - the role of closing dates. Phil Rosston

- **12.15**
  - Oral-Grazing dual-purpose winter wheat in rainfed region of western China. Jeremy Whish (Lihua Jian)
  - Oral-Establishment of a split grass-clover system to improve water quality and profitability. Richard McDowell
  - Oral-The strategic use of chlorsulfuron for seed production of cv. Angel (Medicago littoralis). Jake Howie

- **12.45-1.00pm**

**REGIONAL FIELD TRIPS (includes bagged lunch and restaurant dinner. Please collect your bagged lunch from the Dining Hall before boarding your Field Trip coach)**

- Coaches depart outside the Accommodation Office, Calder Drive at 12.45pm – return by 10:00pm.

**Intensive Arable Production**

**Sponsor:**

**Crops plus Dairy**

**Sponsor:**

**Intensive Sheep**

**Sponsor:**
Venue: Stewart 2 | Crop Production – Nutrient Management (double session – Part A) | Chair: Dr Rob Norton | Sponsor: Lincoln University

**Oral** - Growing maize in dairy effluent paddocks for two consecutive seasons-effect on crop yield and soil. Paul Johnstone (Dirk Wallace)

**Oral** - Cover crops and tillage intensity affect nitrate leaching. Trish Fraser

**Oral** - Developing a searchable national database of crop nutrient response-soil test information for Australia. Simon Speirs

**Oral** - N-Budget - a tool for the management of nitrogen in cropping systems. David Herridge

**Double Session - Part B**

**Improved prediction of wheat yield response to nitrogen curves.** Ben Jones

**Modelling nitrogen mineralization of manures through improved sub-pool characterization.** David Parsons

**Combating food shortage through fertiliser management under improved planting practice.** Ahmad Khan

**Two SALTs – Simulation Assisted Learning Tools for N fertiliser rate calculation.** Howard Cox

Venue: Gillespie Hall | Crop Production – High Rainfall Zone (double session – Part A) | Chair: Dr Garry O'Leary | Sponsor: Plant & Food Research

**Oral** - Improving crop water use efficiency in high rainfall zone (HRZ) Victoria, through appropriate practice change to overcome subsoil limitations. Renick Peries

**Oral** - Providing high rainfall zone growers with confidence in new and alternative management practices. Angela Clough

**Oral** - Yield formation of wheat in the high rainfall zone of south-western Australia. Heping Zhang

**Oral** - Phase durations in wheat will need to be optimised for crops in the high rainfall zone of south-west Victoria to achieve yield potential. Penny Riffkin

**Double session – Part B**

**Oral** - Simulating leaf area duration to predict yield response to foliar fungicide in wheat and barley. James Hunt

**Oral** - Using raised beds to reduce waterlogging of pastures - pasture productivity effects. Graeme Ward

**Oral** - Using raised beds to reduce waterlogging of pastures - impact on runoff and soils. Graeme Ward

**Thumbnail** - Adoption of practices and technologies on Australian grain farms. James Walcott

**Thumbnail** - Spatial and temporal variability in organic carbon observed in soil under lucerne pastures. Richard Hayes

**Thumbnail** - Pulse crops improve productivity of crops in rotations involving various residue management strategies in the High Rainfall Zone of western Victoria. James Nuttall (Penny Riffkin)

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**Winery & Conservation**

Sponsor: [image]

**Mutton to Mussels**

Sponsor: [image]
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<th>Chair</th>
<th>Sponsor</th>
<th>Speaker/Title</th>
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<tbody>
<tr>
<td>8.30</td>
<td>Oral-East India Plateau – Basket Case, or Future Food Basket?</td>
<td>Commerce 1</td>
<td>Prof. Ted Wolfe</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>Peter Cornish</td>
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<tr>
<td>8.45</td>
<td>Oral-Improving grain yield and quality of wheat grown in Haryana (India).</td>
<td>Commerce 2</td>
<td>Prof. Peter Kemp</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>David Coventry (Ashok Yadav)</td>
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<tr>
<td>9.00</td>
<td>Oral-The use of forage legumes in cereal cropping systems of eastern Indonesia.</td>
<td>Commerce 1</td>
<td>Craig McGill</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>Neil Daigleish (Jacob Nulk)</td>
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<tr>
<td>9.15</td>
<td>Oral-Agronomic performance of landrace and certified maize seeds in West Timor, Indonesia.</td>
<td>Commerce 2</td>
<td>Dr. Robyn Dynes</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
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<tr>
<td>9.30</td>
<td>Oral-Inserting wheat into rice-based farming systems of southern Bangladesh.</td>
<td>Commerce 2</td>
<td>David Coventry</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>Perry Poulton (Neil Daigleish)</td>
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<tr>
<td>9.45</td>
<td>oral-Comparing cover crops in organic farming for weed suppression and soil fertility.</td>
<td>Commerce 2</td>
<td>Rob Harris</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>Penny Roberts Craig</td>
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<tr>
<td>10.00</td>
<td>Morning Tea</td>
<td>Exhibition Hall</td>
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<tr>
<td>10.30</td>
<td>Poster Session</td>
<td>Exhibition Hall</td>
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<td>Presenters will be at their posters.</td>
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<tr>
<td>10.45</td>
<td>Oral-Estimated long-term trends in agronomic strategies for managing competition in companion cropping systems.</td>
<td>Commerce 2</td>
<td>Dr. Mark Norton</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>Rob Harris</td>
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<tr>
<td>11.00</td>
<td>Oral-Effects of grazing management on red grass (Bothriochloa macra) in a native pasture.</td>
<td>Commerce 1</td>
<td>Craig McGill</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>Jim Virgona</td>
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<tr>
<td>11.15</td>
<td>Oral-Suppression of vulpia and goose grass in dryland pastures through the choice of sow pasture species.</td>
<td>Commerce 2</td>
<td>Dr. Robyn Dynes</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>Katherine Tozer</td>
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<tr>
<td>11.30</td>
<td>Oral-Competitive effects of wireweed (Polygonum aviculare L.) on lucerne (Medicago sativa L.) during the establishment phase.</td>
<td>Commerce 2</td>
<td>Craig McGill</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>Viv Burnett</td>
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<tr>
<td>11.45</td>
<td>Oral-Predicting yield and nitrogen balance of forage crop rotations in New Zealand using the APSIM systems model.</td>
<td>Commerce 1</td>
<td>Edmar Teixeira</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>Pip Gerard</td>
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<tr>
<td>12.00</td>
<td>Oral-Effect of integrated cropping and pasture renewal on the performance of dairy pasture systems in Canterbury, New Zealand.</td>
<td>Commerce 2</td>
<td>Dr. Robyn Dynes</td>
<td><a href="https://www.ipni.org">IPNI</a></td>
<td>John de Ruitert</td>
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<tr>
<td>1.15</td>
<td>Lunch</td>
<td>Exhibition Hall</td>
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<tr>
<td>1.15-3.00pm</td>
<td>New Zealand Keynote Address and Donald Oration</td>
<td>Gillespie Hall</td>
<td>Dr. John Angus</td>
<td>DairyNZ</td>
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<tr>
<td>3.00pm</td>
<td>Conference Closes</td>
<td>Exhibition Hall</td>
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### Dairy Pasture Production and Management

**Chair:** Mr. Jeremy Savage

<table>
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<th>Time</th>
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<tbody>
<tr>
<td>9.30</td>
<td>Oral - Systems to increase grazeable forage production in the Waikato: A progress report on the tall fescue and perennial ryegrass component of these systems. Cameron Clark</td>
</tr>
<tr>
<td>9.45</td>
<td>Oral - Herbage production and quality from perennial ryegrass and tall fescue pastures in Canterbury and Waikato regions of New Zealand under irrigation. Elena Minnee</td>
</tr>
<tr>
<td>11.00</td>
<td>Oral - Spatial irrigation scheduling for variable rate irrigation. Carolyn Hedley</td>
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<tr>
<td>11.30</td>
<td>Oral - Implications for dry matter production and nitrogen management as soils develop following 'humping and hollowing' on the West Coast. Abie Horrocks (Steve Thomas)</td>
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<tr>
<td>11.15</td>
<td>Oral - An evaluation of two pastoral dairy production systems using automatic milking technology. Jenny Jago</td>
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**Sponsor:** agriseeds

### Crop Production – Physiology and Breeding

**Chair:** Dr. Jim Walcott

<table>
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<th>Time</th>
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<tbody>
<tr>
<td>9.15</td>
<td>Oral - Yield formation in maize hybrids of different 'stay-green' rating. James Kosgey</td>
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<tr>
<td>8.45</td>
<td>Oral - Evaluation of perennial wheat germplasm in an Australian environment. Matthew Newell</td>
</tr>
<tr>
<td>8.30-10.00am</td>
<td>Oral - High insect protection of GM Bt cotton changes crop morphology and response to water compared to non Bt cotton. Steve Yeates</td>
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**Sponsor:** agriseeds

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### Managing Nutrient Losses

**Chair:** Mr. David Stevens

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9.30</td>
<td>Oral - System-level evaluation of dicyandiamide (DCD) for improved environmental outcomes on New Zealand dairy farms. Graeme Doole</td>
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<tr>
<td>9.45</td>
<td>Oral - Nitrate leaching from high production forage crop sequences. Mike Beare</td>
</tr>
<tr>
<td>11.00</td>
<td>Oral - Modelling the effect of a nitrification inhibitor on N leaching from grazed pastures. Rogerio Cichota</td>
</tr>
<tr>
<td>11.30</td>
<td>Oral - Effectiveness of a nitrification inhibitor (DCN) on a Coastal Taranaki dairy farm. Kevin Mac Donald</td>
</tr>
<tr>
<td>11.15</td>
<td>Thumbnail - Investigating the potential of kale to remove soil potassium accumulated from farm dairy effluent application. Bryan Thompson</td>
</tr>
<tr>
<td>11.15</td>
<td>Thumbnail - The effect of DCD on nitrogen losses from urine patches applied to lysimeters in autumn. Jim Moir</td>
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**Sponsor:** Ravensdown

### Pasture Production – Spatial Management

**Chair:** Dr. Mark Norton

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9.30</td>
<td>Oral - Spatial variability in pasture productivity: understanding pasture, landscape and soil interactions. Graham Donald (Mark Trotter)</td>
</tr>
<tr>
<td>9.45</td>
<td>Oral - Factors affecting pasture growth in a topographically diverse native perennial grass pasture on the Central Tablelands of New South Wales. Belinda Hackney (Jim Virgona)</td>
</tr>
<tr>
<td>11.00</td>
<td>Oral - Pasture response to superphosphate application in topographically diverse landscapes of the Central Tablelands and Monaro regions of New South Wales. Belinda Hackney (Guangdi Li)</td>
</tr>
<tr>
<td>11.30</td>
<td>Oral - Spatial movement of livestock in relation to available pasture biomass. Mark Trotter (Jessica Roberts)</td>
</tr>
<tr>
<td>11.15</td>
<td>Thumbnail - Satellite remote sensing as a tool to identify and quantify annual and perennial pastures in Western Australia. Hayley Norman (Waspar Ahmed)</td>
</tr>
<tr>
<td>11.15</td>
<td>Thumbnail - Uneven nutrient distribution in hillside paddocks indicate potential need for variable rate fertiliser application. Richard Simpson</td>
</tr>
</tbody>
</table>

**Sponsor:** Ravensdown

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### Venue: Exhibition Hall

**10.00-10.30am**  
**Morning Tea**
7098 Climate Change– Prediction
Imma Farre
Impact of climate change on wheat yields in Western Australia. Will wheat production be more risky in the future?

7099 Crop Production – Development and herbicide management
Imma Farre
Is there value in having a frost forecast for wheat in the South-West of Western Australia?

7127 Simulation and Decision Support
Darshan Sharma (Harmohinder Dhammu)
Flowering Calculator: Parameters for predicting flowering dates of new wheat varieties in Western Australia

6979 Lucerne Systems
Anthony Whitbread
The potential of summer-growing grasses to fill feed gaps and contribute to sustainable farming systems in the Victorian Mallee.

6989 Crop Production – Crop and pasture sequence decisions
Amanda Cook
The effect of Brassica species on Rhizoctonia solani in low rainfall farming systems on upper Eyre Peninsula.

6917 Crop Production – Soil water and WUE
Abdallah Aldahadha
Interactive effects of root diseases and drought on water use efficiency of wheat.

7126 Crop Production – Soil water and WUE
Allan Peake
A rapid method for estimating plant available water capacity on Vertosols

7034 Managing nutrient loss and water quality
Shaun Lisson (Tina Acuna)
Assessing the risk of nutrient loss under intensive crop production in the Panatana Catchment

6985 Crop Production - High Rainfall Zone
Tina Acuna
Effect of time of sowing on phenology of cereals grown in a temperate environment in south-eastern Australia

7148 Pasture Production – Physiology & Breeding
Rebecca Haling
Assessment of root growth of perennial pasture grasses in acid soils using nove DNA-based methods

7003 Crop Production – Nutrient management
Eileen Perry
New tools for real time N sensing of cereal crops

7087 Intercrops/Cover Crops/Companion Crops
Penny Roberts Craig
A comparison of land equivalent ratios and water use in lucerne and chicory based intercrops

6995 Crop Production – Irrigated crops
Jose Payero
Evaluation of the surface renewal method to estimate crop evapotranspiration of a cotton field

6954 Crop Production – Irrigated crops
Jose Payero
Evaluation of irrigation and nitrogen management strategies for winter wheat production on the Darling Downs

6934 Climate Change – Future Farming
Mary-Jane Rogers
Mapping potential biofuel crops in the Victorian agricultural landscape

7036 Climate Change – Future Farming
Shaun Lisson (Tina Acuna)
Using degradable polymer film to mitigate the impacts of climate variability on agricultural production in low rainfall areas

7009 Climate Change – Future Farming
James Nuttall (Roger Armstrong)
Fast-tracking the adaptation of grain production systems to a changing climate using a participatory action research, development and extension (PARD&E) process.

7181 Crop Production – Nutrient Management
David Parsons
Modelling nitrogen mineralization of manures through improved sub-pool characterization

7010 Crop Production – High Rainfall Zone
James Nuttall (Penny Riffkin)
Pulse crops improve productivity of crops in rotations involving various residue management strategies in the High Rainfall Zone of western Victoria.

6875 Soil Quality – Carbon & Compaction
Mohammad Hamza (Harmohinder Dhammu)
Combined effect of soil moisture and external loads on soil compaction

7186 Emerging Opportunities
Bernard Noonan (Renick Peries)
Soil science on the ground

7015 Farming Systems
Richard Routley
Benchmarking farm water use efficiency in eastern Australian dryland cropping systems
Trade Exhibition

The Trade Exhibition is located in the Recreation Hall, Lincoln University. The exhibition will be open during the following times:

**Sunday 14 November**

3.00 – 6.00pm  Registration open  
6.30pm  Welcome Reception

**Monday 15 November**

12.15 – 2.00pm  Lunch

**Tuesday 16 November**

12.30 – 1.30pm  Lunch

**Wednesday 17 November**

Closed

**Thursday 18 November**

10.00 – 11.00am  Morning Tea & Poster Session  
12.15 – 1.15pm  Lunch

**Friday 19 November**

Available for side-meetings at Lincoln University

**Ashley Dene Centennial.**

Ashley Dene Farm has been in Lincoln University ownership for 100 years and to mark this occasion a special day is to be held on Friday 19 November. In the morning, at 9.00am in the Stewart 1 Lecture Theatre, Lincoln University, there will be a series of presentations and reminiscences on the significant scientific output from Ashley Dene over a long time. The cost for the morning is $30, payable on the day, and includes morning tea, lunch and transport to the Field Day in the afternoon.

The afternoon Field Day is an opportunity to see Ashley Dene and find out about Subterranean Clover management, Lucerne grazing management, the animal trials over the years but mainly plant and animal production on a very summer dry country located on thin soils. The afternoon is free of charge.

The afternoon ends with a barbecue and refreshments.
List of Exhibitors

1. PGW Seeds  
2. Grasslanz  
3. CRT  
4. Plant & Food  
5. AgResearch  
6. Agricom  
7. Dominion Salt  
8. Agriseeds/Heritage Seeds  
9. Ballance Ag Nutrients  
10. DairyNZ  
11. Incitec Pivot  
12. Lincoln University  
13. Ravensdown  
14. Germinal Seeds  
15. NCCARF-PIARN  
16. Beef & Lamb  
17. FAR  
18. Seed Force  
19. Summit Quinphos  

Duncan Ag - external site  
Wintersteiger - external site
Sponsor Information

Agricom
Contact: Mark Brown
Tel: 03 372 0806
Email: mbrown@agricom.co.nz
Website: www.agricom.co.nz

Agriseeds/Heritage Seeds
Contact: Graham Kerr
Tel: 03 318 8514
Email: gak@agriseeds.co.nz
Website: www.agriseeds.co.nz

Ballance Agri Nutrients
Tel: 0800 222 090
Website: www.ballance.co.nz

Beef + Lamb New Zealand
Contact: Andy Bray
Tel: 04 474 0693
Email: andy.bray@beeflambnz.co.nz
Website: www.beeflambnz.co.nz

CRT
Contact: Daryl Jordan
Tel: 03 344 0440
Email: daryl.jordan@crtnz.co.nz
Website: www.crt.co.nz

CSIRO
Contact: Larelle McMillan
Tel: +61 7 3214 2417
Email: larelle.mcmillan@csiro.au
Website: www.csiro.au

DairyNZ
Contact: Diane Young
Tel: 07 858 3750
Email: diane.young@dairynz.co.nz
Website: www.dairynz.co.nz

Dominion Salt
Contact: Brett Hobson
Tel: 03 381 8562
Email: brett.hobson@domsalt.co.nz
Website: www.dominionsalt.co.nz

Duncan Ag
Contact: Craig McIsaac
Tel: 03 688 2029
Email: c.mcisaac@duncanag.co.nz
Website: www.duncanag.co.nz

FAR
Contact: Nick Pyke
Tel: 03 325 6333
Email: pyke@faran.org.nz
Website: www.faran.org.nz

Germinalseeds
Contact: David Kerr
Tel: 06 878 6199
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Website: www.grdc.com.au

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Website: www.incitecpivot.com.au

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Email: Bruce.mckenzie@lincoln.ac.nz
Website: www.lincoln.ac.nz

Plant & Food Research Ltd
Contact: Derek Wilson
Tel: 03 325 6400
Email: Derek.Wilson@plantfood.co.nz
Website: www.plantfood.co.nz

PGW Seeds
Contact: Paul Kenny
Tel: 03 372
Email: pkenny@pgwwrightsonseeds.co.nz
Website: www.pgwrightson.co.nz

Ravensdown
Contact: Mike Whitty
Tel: 03 353 8564
Email: mike.whitty@ravensdown.co.nz
Website: www.ravensdown.co.nz

Seed Force
Contact: James White
Tel: 03 344 1698
Email: james.white@seedforce.co.nz
Website: www.seedforce.com

Summit Quinphos
Tel: 0800 784 674
Email: sales@sq.co.nz
Website: www.summitquinphos.co.nz

Wintersteiger
Contact: Colin Warner
Tel: +61 4 4715 5564
Email: cwarner@adam.com.au
Website: www.wintersteiger.com
Australian Society of Agronomy Conference
The next meeting of this Society will be held in Tamworth in February 2012

New Zealand Grassland Association
The next meeting of this Society will be held in Gisborne in 2011

The Agronomy Society of New Zealand
The next meeting of this Society will be held in Gisborne in 2011