

**Symposium Programme (correct at time of print)**  
**AUSTRALASIAN DAIRY SCIENCE SYMPOSIUM 2010**

***Meeting the Challenges for Pasture-Based Dairying***

**Tuesday 31 August 2010**

- 10.00am Registration desk open  
Venue: Commerce foyer
- 12.00 noon Lunch - sponsored by **AgResearch**  
Venue: Commerce foyer
- 1.00-1.10pm **Opening and Welcome**  
Venue: Commerce 1  
*Grant Edwards (Lincoln University) Chair Organising Committee*
- SESSION 1: ENVIRONMENTALLY SUSTAINABLE DAIRY FARMING**  
*Convenor: Grant Edwards (Lincoln University)*
- 1.10-1.50pm **A system's perspective on the effectiveness of measures to mitigate the environmental impacts of nitrogen losses from pastoral dairy farming**  
*Cecile De Klein, Ross Monaghan, Stewart Ledgard, Mark Shepherd (AgResearch)*
- 1.50-2.10pm **A brief overview and simulation of the effects of some feeding strategies on nitrogen excretion and enteric methane emission from grazing dairy cows**  
*Pablo Gregorini, Alvaro Romero, Pierre Beukes (DairyNZ), Racheal Bryant (Lincoln University)*
- 2.10-2.30pm **Soil based approaches to reducing nitrogen losses**  
*Jim Moir, Keith Cameron, Hong Di (Lincoln University)*
- 2.30-3.00pm **Offered Papers Thumbnails**
- Progress towards forage plant root systems for sustainable dairying**  
*Jim Crush (AgResearch), Shirley Nichols (Lincoln University)*
- Effluent management or nutrient management: A case study of improving dairy shed effluent disposal**  
*David Stevens, David Houlbrooke (AgResearch), Ian Knowles (Telford Polytechnic)*
- Water water everywhere? Farmer responses to competition for water resources in Canterbury, New Zealand**  
*Tracey Payne, David Stevens (AgResearch)*
- Where and when do dairy cows urinate: tools to aid nitrogen emission mitigation**  
*Ina Draganova, Ian Yule (Massey University), Keith Betteridge (AgResearch)*
- Seasonal and dietary effects on the concentration of urinary N from grazing dairy cows**  
*David Pacheco, Kevin Lowe, Mike Hickey, Gerald Cosgrove (AgResearch), Jennifer Burke (Massey University)*

**Using maize silage to reduce the impact of dairy farm systems on water use and quality in New Zealand: A review**

*Ian Williams, Robin Densley, Jakob Kleinmans, Barrie McCarter (Genetic Technologies Ltd), Greg Edmeades (Maizways)*

- 3.00-3.30pm Afternoon tea – sponsored by **AgriSeeds**  
Venue: Commerce foyer
- 3.30-4.10pm **Mitigating methane in a systems context**  
*Harry Clark (AgResearch), Richard Eckard (The University of Melbourne)*
- 4.10-4.30pm **Rumen function and digestive parameters associated with methane emissions in dairy cows**  
*Cesar Pinares-Patin, Harry Clark (AgResearch)*
- 4.30-4.50pm **Offered Papers Thumbnails**
- Approaches to measure nitrogen use efficiency of dairy cows**  
*Long Cheng, Alastair Nicol, Grant Edwards (Lincoln University), Richard Dewhurst (Teagasc)*
- Manipulating dietary N in perennial ryegrass pastures to reduce N losses in dairy cows in spring**  
*Racheal Bryant, Valerie Walpot, Jim Gibbs, Grant Edwards (Lincoln University), Dawn Dalley, (DairyNZ)*
- The effect of different methods of presenting ryegrass and white clover diets on nitrogen utilisation by cows**  
*David Pacheco, Gerald Cosgrove (AgResearch), Jennifer Burke (Massey University)*
- Perceptions of sustainability of farmers with dairy support land**  
*Mark Bennett (Environment Southland), Marv Pangborn, Tony Bywater (Lincoln University)*
- 4.50-5.30pm Panel/open discussion
- 5.45-6.45pm Drinks and Buffet Dinner – sponsored by **DairyNZ**  
Venue: Commerce foyer
- 6.45-7.00pm **Official opening**  
Venue: Commerce 1  
*Professor Roger Field, Vice Chancellor (Lincoln University)*
- 7.00-7.45pm Invited Keynote Speaker  
**Contribution of farmlet scale research in New Zealand and Australia to improved dairy farming systems**  
*Dave Clark (DairyNZ)*
- 8.00pm Conclusion

## Wednesday 1 September 2010

Venue: Commerce 1

### **SESSION 2: DAIRY PRODUCTION SYSTEMS - Sponsored by DairyNZ**

*Convenor: David Chapman (DairyNZ)*

- 8.30-8.40am Sponsor presentation: Bruce Thorrold, Dairy NZ
- 8.40-9.20am **Improving the scientific credibility of farm systems and on farm dairy research**  
*Ian Lean, Christopher Lean (SBScibus)*
- 9.20-9.40am **Improving winter feeding outcomes in South Island dairy herds**  
*Glenn Judson (Agricom), David Stevens (AgResearch), Dawn Dalley (DairyNZ), Grant Edwards, Jim Gibbs (Lincoln University)*
- 9.40-10.00am **Repositioning the forage base for dairy production in a volatile and risky climate**  
*Brendan Cullen (University of Melbourne), Richard Rawnsley (Tasmanian Institute of Agricultural Research), Val Snow (AgResearch)*
- 10.00-10.30am Morning tea - sponsored by **Faculty of Agriculture and Life Sciences, Lincoln University**  
Venue: Commerce foyer
- 10.30-10.50am **Optimal choice of dairy forages: considering risk**  
*Mark Neal (The University of Melbourne), James Neal (New South Wales Department of Primary Industries), Bill Fulkerson (Dairy Farm Consulting, Wollongbar)*
- 10.50-11.10am **Review: Impact of short-term alterations to milking frequency in early lactation**  
*Claire Phyn, John Roche, Jane Kay, Agustin Ruis, Eric Hillerton (DairyNZ), Kerst Stelwagen (AgResearch), Steven Davis (ViaLactia Biosciences)*
- 11.10-12.30pm **Offered Papers Thumbnails**
- Productive and reproductive performance of carryover cows**  
*Marv Pangborn, Keith Woodford (Lincoln University)*
- Dairy farming women: key on-field playmakers not sideline support!**  
*Susan Peoples (AgResearch)*
- The profitability and risk of dairy cow wintering strategies in the Southland region of New Zealand**  
*Pierre Beukes, Pablo Gregorini, Alvaro Romera, Dawn Dalley (DairyNZ)*
- Increasing home grown feed on non-irrigated Waikato dairy farms: production, profit and feed use on two demonstration farmlets**  
*Chris Glassey, Chris Roach (DairyNZ)*
- Feeding pastures for profit – an innovative and practical approach to understanding and managing grazing based feeding systems**  
*Phil Shannon (DPI Victoria)*
- Opportunities for efficiency gains by manipulating milking end-point criteria for cows milked with minimal milking routines**

*Jenny Jago, Jennie Burke, Jacqueline McGowan, John Williamson (DairyNZ)*

**The effect of grazing residual control methods on cow intake and milk production in late spring**

*Lesley Irvine, Mark Freeman, Richard Rawnsley (Tasmanian Institute of Agricultural Research)*

12.30-1.30pm Lunch - sponsored by **Grasslanz Technology Ltd**  
Venue: Dining Hall

**SESSION 2: DAIRY PRODUCTION SYSTEMS (continued)**

*Convenor: Bruce Thorrold (DairyNZ)*

1.30-2.10pm **The emergence, development and effectiveness of decision rules for pasture based dairy systems**

*Kevin MacDonald, Chris Glassey (DairyNZ), Richard Rawnsley (Tasmanian Institute of Agricultural Research)*

2.10-2.30pm **Aligning objective data with grazing management decision making**

*Callum Eastwood, Ruth Nettle, Anne Crawford (The University of Melbourne)*

2.30-2.50pm **The effect of increasing per cow production and changing herd structure on economic and environmental outcomes within a farm system using optimal resource allocation**

*Warren Anderson, Barrie Ridler (Massey University)*

2.50-3.10pm **A modelling analysis to determine N-risk indicators**

*Iris Voleger, Rogerio Cichota, Val Snow, Richard Muirhead, Cecile De Klein (AgResearch)*

3.10-3.30pm Afternoon tea  
Venue: Commerce foyer

3.30-4.20pm **Offered Paper Thumbnails**

**Algorithm improvements deliver higher accuracy of prediction of pasture cover from satellite data on Waikato dairy farms**

*Gonzalo Mata, Asoka Edirisinghe (CSIRO Livestock Industries), Deanne Waugh, Sue Petch, Dave Clark (DairyNZ)*

**Spatial mapping of soil water holding capacity improves irrigation efficiency**

*Samuel Dennis, Robyn Dynes, Todd White, Val Snow (AgResearch), Ian Yule (Massey University), Carolyn Hedley (Landcare Research)*

**Pasture mass estimation by the C-DAX pasture meter: regional calibrations for New Zealand**

*Warren King, Robyn Dynes, Grant Rennie, Martin Upsdell (AgResearch), Dawn Dalley, (DairyNZ)*

**Estimating farm pasture cover using a limited number of paddocks**

*Richard Rawnsley, Lydia Turner, Rob La Grange, Christopher Haynes (Tasmanian Institute of Agricultural Research)*

**The consequences of variability in pasture growth and milk price on dairy farm profitability**

*Linda Yates, Jesse Dotterer (AgResearch), Alan McDermott (Anzco Foods)*

**Evaluating the effectiveness of the UDDER simulation model as a decision support tool for farm management**

*Kevin Macdonald, Jim Lancaster, John Roche (DairyNZ), David Beca (Red Sky Agricultural Pty Ltd), John Penno (Synlait)*

**Exploring the profitability of supplementary feeding in mid to late lactation using a decision support model, Farmax Dairy Pro**

*Jeremy Bryant, Graeme Ogle, Paul Marshall (Farmax Ltd)*

**Agricultural extension: a review and case study in the Tasmanian dairy farming sector**

*Rob La Grange, Marion Titterton, Elizabeth Mann, Christopher Haynes (Tasmanian Institute of Agricultural Research)*

**Managing production system risk: An application of Monte Carlo simulation to Tasmanian dairy farm data**

*Courtney Gronow (Agrilink FarmStats Pty Ltd, Victoria), S.B. Little (Dairy Australia), Gordon Cleary (Dairy Business Centre Pty Ltd, Victoria)*

- 4.20- 5.00pm Panel/Open Discussion
- 6.00pm Coach departs Lincoln University for Symposium dinner at Melton Estate Vineyard, a boutique vineyard just 20 minutes from Christchurch
- 7.00pm Symposium dinner – sponsored by **DPI Victoria**  
Venue: Melton Estate Winery

**Thursday 2 September 2010**

Venue: Commerce 1

**SESSION 3: FORAGE PRODUCTION AND ANIMAL RESPONSE - sponsored by DPI Victoria**

*Convenor: Ron Prestidge (DPI Victoria)*

- 8.30 -8.40am Sponsor presentation: Ron Prestidge, DPI Victoria
- 8.40 -9.20am **Past lessons and future prospects: plant breeding for cool temperate pastures**  
*Tony Parsons (Massey University & AgResearch), Grant Edwards (Lincoln University), Paul Newton, Susanne Rasmussen (AgResearch), David Chapman (DairyNZ), Jacqueline Rowarth (Massey University)*
- 9.20-9.40am **Capturing the benefits of alternative forages for increased dairy farm profitability**  
*Joe Jacobs (DPI Victoria), Sharon Woodward (DairyNZ)*
- 9.40-10.00am **Using molecular biology techniques to improve our ability to manage pasture**  
*Julia Lee, John Roche (DairyNZ), Danny Donaghy (Tasmanian Institute of Agriculture), Sathish Puthigae (ViaLactia Biosciences)*
- 10.00-10.30am Morning tea – sponsored by **Germinal Seeds NZ Ltd**  
Venue: Commerce foyer
- 10.30-11.10am **Offered Paper Thumbnails**

**Establishment and dry matter production of kale supplied with banded or broadcast phosphorus (P) fertiliser**

*Emmanuel Chakwizira, Andrew Fletcher (Plant & Food Research), Derrick Moot, Warwick Scott (Lincoln University)*

**Intake and feeding behaviour of dairy cows grazing kale and grass at low and high allowances during winter**

*Innocent Rugoho, Jim Gibbs, Racheal Bryant, Grant Edwards (Lincoln University)*

**Rumen degradation and fermentation characteristics of forage rape**

*Ravneet Kaur, Sergio Garcia (University of Sydney)*

**Impacts of forage cropping on Taranaki dairy farms**

*John de Ruiter (Plant & Food Research), Joe Clough, Kevin Macdonald, Chris Glassey, (DairyNZ)*

**Milk solids yield from high water soluble carbohydrate ryegrasses: a combined analysis of multi-year data**

*Gerald Cosgrove, John Koolaard, Fred Potter, Dongwen Luo, David Pacheco (AgResearch) Jennifer Burke (Massey University)*

**Increasing digestibility of forage for increased productivity: “when” is as important as “by how much”**

*David Pacheco, Roland Vibart, Kim Richardson, Brent Barrett (AgResearch)*

**Effects of ambient temperature and osmotic stress on leaf appearance rate**

*Richard Rawnsley, T.A. Snare, Lydia Turner (Tasmanian Institute of Agricultural Research), Peter Lane, Greg Lee (School of Agricultural Science, University of Tasmania)*

**Yellow bristle grass spread in Waikato dairy pastures**

*Katherine Tozer, C Cameron, T James (AgResearch)*

**Giant buttercup - a threat to sustainable dairy farming in New Zealand**

*Graeme Bourdot (AgResearch) David Saville (Saville Statistical Consulting)*

11.20-11.50am Panel/Open Discussion

11.50am-12.30pm **Offered Paper Thumbnails**

**Development and application of a thermal stress model**

*Jeremy Bryant (Farmax Ltd), Lindsay Matthews (AgResearch), John Davys (Rezare Systems Limited)*

**Effects of hot weather on milk production in Canterbury dairy herds**

*Graham Barrell (Lincoln University)*

**Dairy cow responses to the wild-type endophyte in perennial ryegrass**

*Errol Thom, Deanne Waugh, Elena Minnee (DairyNZ)*

**The effect of two milk flow-rate thresholds for automatic cup removal on milking duration, production and somatic cell count of peak-lactation dairy cows**

*Jennie Burke, Jenny Jago (DairyNZ)*

**Influence of inter-milking interval on the excretion of somatic cells in cows' milk**

*Richard Williams, Peter Moate, Murray Hannah, Tim Clarke (DPI Victoria)*

**Performance-based targeted selective anthelmintic treatment regime for grazing dairy calves**

*Andy Greer, Robin McAnulty, Jim Gibbs (Lincoln University)*

**Parasitism of calves in South Island large dairy herds**

*Robin McAnulty, Jim Gibbs (Lincoln University)*

**From phenotypes to molecules: towards understanding the role intracellular signalling pathways play in nutrient partitioning**

*Sue McCoard, David Pacheco (AgResearch)*

**Development and characterization of the ruminant model of metabolic acidosis and its effects on protein turnover and amino acid status**

*Sabrina Greenwood (Lincoln University), Brian McBride (University of Guelph)*

12.30-1.30pm Lunch - sponsored by **Donaghys Industries Ltd**  
Venue: Dining Hall

**SESSION 4: HERD FERTILITY AND WELFARE**

*Convenor: Eric Hillerton (DairyNZ)*

1.30-2.10pm **Reproductive management practices in New Zealand dairy farms: what will the future hold in a consumer-focused, export-driven marketplace?**

*Mark Blackwell, Chris Burke, Gwyneth Verkerk (Dairy NZ)*

2.10-2.30pm **Understanding mechanisms contributing to reduced fertility: The reproductive physiology of sub-fertility**

*Susan Meier, Chris Burke (DairyNZ)*

2.30-2.50pm **Dairy lameness in the South Island**

*Jim Gibbs (Lincoln University)*

2.50-3.10pm **Offered Paper Thumbnails**

**The presence of *Dichelobacter nodosus* and *Fusobacterium necrophorum* on the claws of lame dairy cattle in New Zealand**

*Jon Hickford, Grant Bennett, Huitong Zhou (Lincoln University)*

**Claw characteristics, horn lesion development and strength and integrity of horn of Jersey cross bred and Friesian first lactation dairy cattle**

*Louise Lethbridge, Jean Margerison (Massey University)*

**Meta analysis of claw horn disease and claw horn anatomy in UK and New Zealand first lactation dairy cattle**

*Louise Lethbridge, Jean Margerison (Massey University)*

**The effect of increasing the nutrient and amino acid concentration of whole milk diets on dairy heifer individual feed intake, growth and development rates**

*Jean Margerison, Andrew Robarts, Richard Laven, Gordon Reynolds (Massey University)*

**Do thermal stress models reflect the behavioural requirements of dairy cattle?**

*Lindsay Matthews (AgResearch), Jeremy Bryant (Farmax Ltd)*

3.10-3.30pm Afternoon tea  
Venue: Commerce foyer

3.30-4.10pm **Managing cow welfare in large dairy herds**  
*Gwyneth Verkerk (DairyNZ), Paul Hemsworth (University of Melbourne)*

4.10-4.30pm **Measuring what animals really want: implications for welfare on dairy farms**  
*Adele Arnold (DairyNZ), Lindsay Matthews (AgResearch)*

4.30-5.00pm	Panel/ Open Discussion
5.00-5.15pm	Conference Review <i>David Chapman (DairyNZ)</i>
5.15pm	Symposium concludes