

Room:	Grand Ballroom
Chair:	Richard Eckard

0900 -
0910 Welcome from Conference Chair

0910 -
0920 Welcome - **Junichi Takahashi and Roger Hegarty** (*mp4 not available*) ([pdf](#))

0920 -
0940 Opening

Theme:	1. Global perspectives and policy
Chairs:	Dr Harry Clark & Dr Alexandre Berndt

0940 -
1005 Achieving food security and climate change mitigation - the policy challenge for animal production - **Pierre Gerber** (*mp4 not available*) ([pdf](#))

1005 - International initiatives in support of agricultural GHG mitigation - **Martin Scholten** (*mp4 not available*) ([pdf](#))
1030

Theme:	6. Mitigation in practice
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Chairs: Professor Roger Hegarty & Dr Cecile Martin

1030 - The concordance between greenhouse gas emissions, livestock production and
1045 profitability of extensive beef farming systems - **Matt Harrison** (*mp4 not available*) ([pdf](#))

1045 - Nitrification inhibitors to mitigate nitrous oxide - a summary of UK data - **Tom**
1100 **Misselbrook** (*mp4 not available*) ([pdf](#))

1100 - 1130	Morning Tea	
Room:	Grand Ballroom 1 & 2	Grand Ballroom 3 & 4
Theme:	6. Mitigation in practice	9. Adaptation and mitigation

Chairs:	Dr Joe Jacobs & Dr Marta Alfaro	Dr Cecile de Klein & Dr Mark Powell
1130 - 1145	Enteric methane emissions of nellore steers in different grazing production systems in Brazil - Alexandre Berndt (mp4) (pdf)	Forage quality and methane production of the grazing portion of grass produced under elevated [CO ₂] - Adibe Abdalla (mp4) (pdf)
1145 - 1200	Carbon footprint of milk production under smallholder dairying in Anand district of India: A cradle-to-farm gate life cycle assessment - Manget Ram (absent)	Use of dietary nitrate supplementation to reduce methane emissions in ruminants: effects of ruminal adaption and supplementary glucose or glycerol on microbial fermentation and nitrite accumulation in rumen contents in vitro - Victoire De Raphélis-Soissan (mp4) (pdf)
1200 - 1215	Getting traction for action: how Australian abatement methodologies are being translated to on farm practices - Tom Davison (mp4) (pdf)	Achieving mitigation through adaptation: climate smart livestock solutions in Southern Africa - Anne Mottet (mp4) (pdf)
1215 - 1230	The effect of dietary nitrate on enteric methane emissions and methaemoglobin in ruminants: a meta-analysis - Jamie Newbold (mp4)	Greenhouse gas offsets in livestock systems - Sheilah Nolan (mp4) (pdf)

[\(pdf\)](#)

1230 - 1330	Lunch
Room:	Grand Ballroom
Theme:	5. Mitigation of methane and nitrous oxide from excreta and manure management
Chairs:	Prof Phil Vercoe & Prof Adibe Abdalla

1330 -
1355 Swine wastewater treatment technology to reduce nitrous oxide emission by using an aerobic bioreactor packed with carbon fibres - **Takahiro Yamashita** ([mp4](#)) ([pdf](#))

1355 -
1420 Nitrous oxide emissions from livestock urine and dung - **Dave Chadwick** ([mp4](#)) ([pdf](#))

Theme:	3. Advances in understanding biology and biochemistry of non-CO ₂ emissions from livestock
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1420 - Molecular biology and biochemistry of archaeal DNA replication - **Isaac Cann**
 1445 ([mp4](#)) ([pdf](#))

1445 - An integrated compound library screening approach for discovery of specific
 1510 inhibitors for mitigating ruminant methane emissions - **Greg Cook** (*presentation not
 available*)

1510 - 1540	Afternoon Tea	
Room:	Grand Ballroom 1 & 2	Grand Ballroom 3 & 4
Theme:	5. Mitigation of methane and nitrous oxide from excreta and manure management	3. Advances in understanding biology and biochemistry of non-CO ₂ emissions from livestock
Chairs:	Prof Claudia Wagner-Riddle & Dr Soren Petersen	Dr Peter Moate & Dr Diego Morgavi

1540 - Nitrous oxide emissions and
 1555 relationships with ammonia oxidising communities, soil conditions and the use of a nitrification inhibitor - **Hong Di** ([mp4](#)) ([pdf](#))

The importance of co-denitrification in nitrogen cycling in grazed pasture systems - **Karl Richards** ([mp4](#)) ([pdf](#))

1555 -
1610 Acidification with sulfur of the separated solid fraction of raw and co-digested pig slurry: effect on GHG and ammonia emissions during storage - **Elio Dinuccio**
[\(mp4\)](#)
[\(pdf\)](#)

Contribution of the co-denitrification process to soil nitrous oxide and dinitrogen emissions under ruminant urine patches - **Tim Clough**
[\(mp4\)](#)
[\(pdf\)](#)

1610 -
1625 Greenhouse gas emissions from dung, urine and dairy pond sludge applied to pasture. 1. Nitrous oxide emissions - **Kevin Kelly**
[\(mp4\)](#)
[\(pdf\)](#)

High-resolution denitrification kinetics in pasture soils link N₂O emissions to pH, and denitrification to soil respiration and moisture content - **Sergio Morales**
[\(mp4\)](#)
[\(pdf\)](#)

1625 -
1640 Reducing Gaseous Emissions from Manure Management in Ireland - **Gary Lanigan**
[\(mp4\)](#)
[\(pdf\)](#)

Comparison of methane emissions of Belgian Blue and Holstein Friesian heifers - **Nico Peiren**
[\(mp4\)](#)
[\(pdf\)](#)

1640 -
1655 Mixing dicyandiamide (DCD) with supplementary feeds for cattle: an effective method to deliver a nitrification inhibitor to urine patches - **Eddy Minet**
[\(mp4\)](#)
[\(pdf\)](#)

Disentangling the effect of urine patch size and N content on cumulative N₂O emissions - **Karina Marsden**
[\(mp4\)](#)
[\(pdf\)](#)

1655 - Greenhouse gas emissions from different dairy barnyard surfaces - **Mark Powell**

Phloroglucinol degradation in the rumen promote the redirection of hydrogen when methanogenesis is

1710 [\(mp4\)](#) [\(pdf\)](#) suppressed - **Gonzalo Martinez Fernandez** [\(mp4\)](#) [\(pdf\)](#)

1710 Day One Ends

1800 - 2100	Evening Reception Function
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Room:	Grand Ballroom
Theme:	7. Whole farm systems modeling of mitigation options
Chairs:	Dr Ed Charmley and Prof Deli Chen

0900 - Assessing simulation models for field scale projections of pasture and crop GHG emissions - **Jean Francois Soussana** [\(mp4\)](#) [\(pdf\)](#)

0925 - WFS evaluation of mitigation options for the livestock industries - **Richard Rawnsley and Robyn Dynes** [\(mp4\)](#) [\(pdf\)](#)

Theme:	2. Improvements in the measurement of methane and nitrous oxide	
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0950 - 1015 The sulphur hexafluoride (SF6) tracer gas technique for determination of methane emissions from ruminants - **Matt Deighton** ([mp4](#)) ([pdf](#))

1015 - 1040 The GreenFeed system for measurement of enteric methane emissions from cattle - **Kirsty Hammond** ([mp4](#)) ([pdf](#))

1040 - 1120	Morning Tea	
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Room:	Grand Ballroom 1 & 2	Grand Ballroom 3 & 4
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Theme:	2. Improvements in the measurement of methane and nitrous oxide	7. Whole farm systems modeling of mitigation options 8. Advances in process level modeling of methane and nitrous oxide
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Chairs:	Alex Hristov & Carla Soliva	Dr Robyn Dynes & Ermias Kebreab
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1120 - F-NIRS approach of the seasonal profile of CH4 emission of dairy herds Modeling the Effects of Variation in Passage Rate on Methane Emissions -

1135	in a agro sylvo pastoral ecosystem of sub-Saharan Africa (Kolda, Senegal) - Alexandre Ickowicz (mp4) (pdf)	Pekka Huhtanen (mp4) (pdf)
1135 - 1150	A real-time intra-ruminal gas monitoring system for ruminants - Greg Bishop-Hurley (mp4) (pdf)	Quantifying the Greenhouse Gas Benefits of Changes in Livestock and Manure Management at the Farm Scale - April Leytem (mp4) (pdf)
1150 - 1205	Repeatability of methane emissions in Australian beef cattle - Kath Donoghue (mp4) (pdf)	Ex-ante farm-scale analysis of the impacts of livestock intensification on greenhouse gas emissions of mixed crop-livestock systems in western Africa - Jonathan Vayssières (mp4) (pdf)
1205 - 1220	Additional data to the methane inventory for sheep and the effect on the current predictions - Stefan Muetzel (mp4) (pdf)	How can grass-based dairy farmers reduce the carbon footprint of milk? - Donal O'Brien (mp4) (pdf)
1220 - 1235	Methane emission measured with sensors correlates with climate respiration chamber measurement - Marleen Visker (mp4)	Relationships between milk fatty acid profiles and enteric methane production in dairy cattle fed grass- or grass silage-based diets - Jan Dijkstra (mp4)

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1235 -
1250
Evaluation of Diurnal Patterns of
Methane Emissions - **Scott
Zimmerman**
[\(mp4\)](#)
[\(pdf\)](#)

Manure (re)distribution as predictor of
N₂O emissions - **Soren Petersen**
[\(mp4\)](#)
[\(pdf\)](#)

1250 - 1320	Lunch
1320 - 1420	DSM Lunch Symposium
Room:	Grand Ballroom
Theme:	8. Advances in process level modeling of methane and nitrous oxide
Chairs:	Dr Jean-Francois Soussana & Andre Bannink

1420 -
1445
The AusBeef rumen model: description and comparison of improved methane
prediction methods - **Ermias Kebreab** [\(mp4\)](#) [\(pdf\)](#)

1445 - 1510 Explicit modelling of urinary losses and nitrous oxide - **Val Snow** ([mp4](#)) ([pdf](#))

1510 - 1800	Afternoon Tea & Poster Session
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0900 - 1600 Mid conference tour - Ellinbank Dairy Centre - **[view outline](#)**

1900 - 2300 Conference Dinner

Room:	Grand Ballroom 5 & 6	Grand Ballroom 4
Theme:	5. Mitigation of methane and nitrous oxide from excreta and manure management	3. Advances in understanding biology and biochemistry of non-CO2 emissions from livestock
Chairs:	Tom Misselbrook & Karl Richards	Karen Beauchemin & Yvette de Haas

0900 - Greenhouse gas emissions during Circadian characterization of thyroid

0915	<p>storage of digested manure - effects of the digester hydraulic retention time - Lena Rodhe (mp4) (pdf)</p>	<p>hormones, methane and heat production profiles across physiological states in replacement beef heifers - Yuri Montanholi <i>(mp4 unavailable)</i> (pdf)</p>
0915 - 0930	<p>Reducing the contribution of stored manure to the greenhouse gas budget of dairy farms - Claudia Wagner-Riddle (mp4) (pdf)</p>	<p>The application of 'omic' technologies to understand low methane animal gut systems - Stuart Denman <i>(mp4 unavailable)</i> (pdf)</p>
0930 - 0945	<p>Using lignite to mitigate of ammonia loss from intensive cattle feedlots - Deli Chen (mp4) (pdf)</p>	<p>Nutritional amendments to simultaneously minimize enteric methane emissions and nitrogen excretion from dairy cows - Mutian Niu <i>(mp4 unavailable)</i> (pdf)</p>
0945 - 1000	<p>Methane, Nitrous Oxide and Carbon-dioxide emissions from the liquid dairy manure management chain in New Zealand as affected by acidification and separation - Tim Clough (mp4) (pdf)</p>	<p>Specific and chemically-defined inhibitors of ruminant methanogens: a review - Ron Ronimus <i>(mp4 unavailable)</i></p>
1000 - 1040	<p>Morning Tea</p>	

Room:	Grand Ballroom 5 & 6
Theme:	1. Global perspectives and policy
Chairs:	Dr Pierre Gerber and Dr Martin Scholten

1040 - A universal equation to predict methane production of forage-fed cattle in
1055 Australia - **Ed Charmley** ([mp4](#)) ([pdf](#))

1055 - Greenhouse gas mitigation potential of the world's grazing lands: modelling soil
1110 carbon and nitrogen fluxes of mitigation practices - **Ben Henderson** ([mp4](#)) ([pdf](#))

1110 - How much does livestock actually contribute to global warming? - **Harry Clark**
1125 ([mp4](#)) ([pdf](#))

Theme:	New advances in methane mitigation of emissions from ruminant livestock
Chairs:	Dr Chris McSweeney & Professor Metha Wanapat

1125 - Enteric methane amelioration using plant secondary metabolites - **Raghavendra Bhatta** ([mp4](#)) ([pdf](#))
1150

1150 - 1250	Lunch
Room:	Grand Ballrom 5 & 6

1250 - An inhibitor of methanogenesis that could reduce green house gas emissions by
1305 ruminants - **David Yanez-Ruiz** ([mp4](#)) ([pdf](#))

1305 - Effect of 3-nitrooxypropanol on ruminal fermentation, methane and hydrogen
1320 emissions, and methane isotopic composition in dairy cows - **Alexander Hristov**
([mp4](#)) ([pdf](#))

1320 - Sheep grazing a shrub and pasture inter-row system have lower methane intensity
1335 than sheep grazing pasture with grain supplementation - **Philip Vercoe** ([mp4](#))
([pdf](#))

1335 - Interactions between diet and rumen transcriptomic pathways and association
1350 with methane emissions - **Ruidong Xiang** ([mp4](#)) ([pdf](#))

1350 -
1405 Global Rumen Census Program - **Bill Kelly** ([mp4](#)) ([pdf](#))

1405 -
1420 Short-term and long-term 3-nitrooxypropanol (NOP) supplement reduces enteric
CH₄ by altering rumen microbial profiles in beef cattle - **Mi Zhou** ([mp4](#)) ([pdf](#))

1420 -
1450 Conference Summary and Closing Organising Committee ([mp4](#))([pdf](#))

1450 - 1520	Afternoon Tea
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