



CSIRO

Science for the future of Australia's beef industry

James Lawrence Pavilion - Room 1

Wednesday 6 May 2009 – 8.30 am – 10.00 am

You are invited to learn about some of CSIRO's latest research supporting Australia's beef industry to become an even stronger global competitor in the 21st century.

Chair: John Cotter, President AgForce Queensland

South East Queensland cattle producer, **John Cotter** was elected President of AgForce Queensland in September 2008. AgForce is the peak organisation representing Queensland's rural producers, which strives to ensure the long term growth, viability, competitiveness and profitability of broad acre industries of cattle, grain, sheep and wool in Queensland.

John is Chair of AgForce's Policy Council and a long standing member of the AgForce Executive and AgForce State Council. At his property, 'Kinbombi Station', near Goomeri in the South Burnett, the family produces export beef for the Japanese and US markets, as well as 'Kinbombi Beef', a branded label targeting direct consumer supply.

Presenters: Dr Sigrid Lehnert and Dr Dave Swain, CSIRO; Dr Martyn Jeggo – Australian Animal Health Laboratory, Geelong

New Approaches to Livestock Breeding (Dr Sigrid Lehnert – Brisbane)

In a first for Australian agriculture, CSIRO scientists have used stem cell technology to create a novel way of inseminating livestock to accelerate the rate of genetic improvement. Researchers have used a cutting-edge technique called 'testis cell transfer' where germ stem cells have been transferred from one male animal to another, so that the recipient animal becomes a surrogate, able to produce semen with the genetic code of the donor animal.

Virtual Fencing and Cyber Cowboys – the 'Smart' Farm of the Future (Dr Dave Swain – Rockhampton)

CSIRO's research on Wireless Sensor Networks has the potential to transform agricultural production in Australia. Timely and accurate information may change forever how daily farm management decisions are made.

Keeping Australia Free from FMD (Dr Martyn Jeggo, Australian Animal Health Laboratory (AAHL), Geelong)

AAHL is a national facility designed and operated by the Australian Government to ensure that Australia has the best possible protection against and preparedness for outbreaks of infectious animal diseases such as Foot and Mouth Disease (FMD). To maintain Australia's research capability in FMD, CSIRO scientists are actively involved in off-shore FMD research in several countries where FMD already exists, including South Africa, Argentina, Thailand and Vietnam

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About the Speakers

Dr Sigrid Lehnert

Dr Lehnert's research is aimed at discovering the genetic and biochemical mechanisms that govern ruminant reproductive performance and developing biotechnology-based approaches to genetic improvement and sex ratio manipulation in livestock.

In a research project funded by the CSIRO Food Futures National Research Flagship, Dr Lehnert is working with a team of reproductive biologists and molecular scientists to overcome technical obstacles to the commercial adoption of testis cell transfer in livestock animals.

Dr Lehnert has a Bachelor of Science with Honours in Zoology (animal developmental biology) from the University of Glasgow, Scotland and a Doctor of Philosophy in Genetics from University College, London. She has worked as a Research Scientist with CSIRO since 1990.



Dr Dave Swain

Dr Swain leads the Livestock Systems research team, based at CSIRO Livestock Industries' JM Rendel Laboratory in Rockhampton, Queensland.

His recent research has been based around grazing systems with a particular interest in developing modelling and experimental methods to explore selection behaviour within spatially constrained environments.

Dr Swain and his team are studying cattle behaviour in the natural environment in order to gather important information that could lead to improved livestock management practices.

Dr Swain has a Bachelor of Science, with Honours, in Ecology from Lancaster University, UK and Doctor of Philosophy in Ecology from the University of Wales, Swansea, UK. His doctoral studies looked at long-term environmental change on Mt Kenya in East Africa.

Dr Swain joined CSIRO in Rockhampton in 2003, starting a new group to look at livestock behavioural ecology in extensive grazing systems.



Dr Martyn Jeggo

Dr Jeggo has headed CSIRO's Australian Animal Health Laboratory (AAHL) since 2002. He has brought a wealth of experience in controlling and detecting exotic and emerging animal disease to his role of Director. During his time at AAHL, some A\$55 million has been invested to improve and upgrade the facility.

Prior to joining AAHL from 1996-2002, Dr Jeggo was Head of the Animal Production and Health Science Section of the Joint Food and Agricultural Organisation/ International Atomic Energy Agency (FAO/IAEA) Division of Agriculture, in Vienna, Austria.



In that role, he managed a range of FAO/IAEA Coordinated Research Programs involving more than 200 research contracts relating to animal production and health. These were operational in some 130 countries.

For more than 15 years, Dr Jeggo oversaw the management of laboratory networks dealing with, rinderpest and contagious bovine pleuropneumonia in Africa, foot and mouth disease in Asia and brucellosis worldwide.

Dr Jeggo has visited more than 150 national veterinary laboratories in Africa, Asia and the Americas. He has held the positions of Director of the Veterinary Diagnostic Laboratories in the Yemen Arab Republic and Head of the Department of Immunology at the United Kingdom's Institute of Animal Health Pirbright Laboratories.

Dr Jeggo has a:

- § Bachelor of Veterinary Medicine from the Royal Veterinary College, London, in the United Kingdom (UK)
- § Master of Tropical Veterinary Science from the Centre for Tropical Veterinary Medicine, Edinburgh University, UK
- § Doctor of Philosophy from Surrey University, UK.

Dr Jeggo's is also a leading member of the Foot and Mouth Disease (FMD) Global Research Alliance.