



**Summary of the 22nd Board Meeting of DEERResearch Ltd
(incorporating the 2nd Governance Council Meeting of the
Venison Supply Systems Programme)**

Wednesday 13 August 2008, AgResearch, Hamilton

AGENDA

1. Apologies
 2. Minutes of the Previous Meeting (30 April 2008)
 3. Matters Arising
 4. Register Update
 - A. Interests
 - B. Intellectual Property
 5. Financial Report
 6. General Business
 7. Research Consortia Updates
 - a. Johne's Disease Research Consortium
 - b. Pastoral Greenhouse Gas Research Consortium
 - c. Pastoral Genomics
 8. Suggested Meeting Dates and Calendar of Key Events
 9. Research Updates
 - a. Project 7.04: Seasonal variation in venison quality (drip loss)
 - b. Project 7.03: Massey Deer Research Unit
 - c. Project 7.05: SFF Parasite diagnostics
 10. Venison Supply Systems Governance Council Meeting
 - a. Introduction
 - b. Project updates
 - c. Achievements and variances on milestones 2007/08
 - d. Planned milestones for 2008/09
 - e. Outputs for 2007/08
 - f. Outline of new projects starting during 2008/09
 - g. Emerging issues
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Present / Attending

- C Isaacs (Chairman), K Ashby, N Beatson, P Benfell, M Buick, F Griffin, M O'Connor
- J Scurr, T Pearse, L Fung (DINZ)
- Z Hanley, M Dunbier (for Agenda Item 7)
- W Taylor, D Smith, E Wiklund, G Asher, S Hoskin (for Agenda Items 9 and 10)

Matters Arising

06/07-31: *Request updates on JD vaccination programme:* This will now be provided via the Johne's diseases research consortium updates. Complete – delete from Matters Arising.

07/08-20: *Archived research to be found and activated for implementation through current focus farms.* Some work on this is being developed by AgResearch for focus farms and will be combined with the cost-benefit work. Ongoing – to be incorporated into VSS milestones for 2008/09.

General Business

- Three Sustainable Farming Fund (SFF) projects have been successfully secured (funds are GST inclusive):
 - i. *Enhanced management of Johne's disease in the venison supply chain* (Johne's Research Group 2): \$89,000 from SFF, \$30,000 from industry. To be run via JML and assist with setting up a network of veterinarians with Jd expertise.
 - ii. *Determining net Greenhouse Gas (GHG) emissions and Environmental Footprints of a Deer Focus Farm* (Central Regions, NZDFA Deer Industry Focus Farm Community Group). \$19,000 from SFF, \$25,000 from industry and Hawke's Bay Regional Council. Development of data recording and analytical techniques to measure the ETS criteria and GHG emissions and sinks on a large working deer/cattle farm. The project will have the potential to create understanding of the monitoring and basis of ETS in a practical sense and prepare an understanding of the systems and changes in management that may be applied as part of a mitigation and reduction approach to GHG emissions.
 - iii. *Developing tussock country without killing the tussocks* (South Canterbury North Otago Deer Farmers Association): Increasing productivity of dry-land high country through increase N fertiliser use, without sacrificing tussocks.
- The next round of MAF funded GHG Footprinting will close on 18 September 2008. Venison and beef were discussed as a possible addition to the currently funded lamb project. Landcorp is working with AgResearch for lamb, beef and mutton and so see venison as a logical addition.

Research Consortia Updates

- *Pastoral Genomics (project 1.16):* The consortium is seeking a five-year extension from 1 July 2009. Zac Hanley (Consortium Manager) and Mike Dunbier (Chairman) presented an outline of progress to date and the business case for continued investment. A very preliminary calculation estimates that new forage plants with improved drought tolerance,

15% more biomass and more condensed tannins would have an economic impact of ca. \$450m per annum for the beef and deer industries. These calculations will be refined using other economic modelling tools (PGgRC and DairyNZ).

The risk profile for this research has diminished compared with that at the beginning as the molecular biological risks have been overcome (i.e. functional plants have been bred and grown under containment). The major hurdle now is regulatory: the release for field trials/commercial use, but this should be less of an issue as the approach is to use cisgenics[®] in forages going into meat (and velvet) production.

The Board approved in concept a further five year funding commitment, contingent upon continued funding from other consortium partners at similar levels.

Pastoral Genomics will be invited to speak at the next industry annual conference.

- *Methane mitigation - pastoral greenhouse gas research consortium (project 1.03):* An update from the consortium for the Meat Board was provided to DEEResearch.
- *Johne's disease research consortium (project 7.01):* The consortium is now operational as of 1 July 2009 following review and approval of science plan.

Research Updates

- *Massey Deer Research Unit (project 7.03):* A list of outputs from the unit was presented by Simone Hoskin. Following funding from DEEResearch, Massey University subsequently reversed its suggestion that the unit would be dismantled and extended the area of the unit by one third. This was in large part due to industry commitment to supporting the unit as a strategic asset.
- *Drip loss (project 7.04):* Interim results were presented to the VPTC meeting (30 July 2008) and DEEResearch (13 August 2008) and are summarised here for information:

Quality	Sample time	Slaughter Date			
		Dec-07	Mar-08	Jul-08	Sep-08
Drip loss (%)	1 day	3.24 ^a	1.04 ^b	3.21 ^a	-
	3 weeks	3.70 ^a	2.55 ^b	2.70 ^b	-
Shear force (N)	1 day	6.5 ^a	11.6 ^b	9.4 ^c	-
	3 weeks	4.2 ^a	5.0 ^b	3.9 ^a	-
Display life (days)	1 day	7-8	4-5	7	-
	3 weeks	3-4	3-4	3-4	-

This project will complete analysis in January 2009.

- *SFF parasite diagnostic tool (project 7.05):* Report noted. Final SSF report due 30 June 2009.

Venison Supply Systems Governance Council Meeting

Objective 1: Early breeding/optimised feeding

- Genetics of seasonality
 - A big drop in estimated heritability of conception date this season (drought effects?)
 - Further support for previous research that shows that Eastern strains are 13-15 days earlier than Western strains
 - Initial area of interest (Melatonin 1A receptor) has not showed any variation – therefore not a candidate for early breeding selection.
 - Partial sequencing of deer genome offers a better approach to early breeding (but cost will be an issue). Baseline data on traits are being gathered in conjunction with Landcorp and DIL.
- Physiology of seasonality
 - Oestrous cyclicity study showing “early and wide” seasonality. Will be completed and reported by March 2009.
 - Next stage will examine effect of conception date and hind metabolism on foetal growth and calving.
- Rumen development and calf growth
 - Rumen development rates vary between years – changes could be made via diet.
- Antler suppression
 - Immuno-castration: Investigating the effects of anti-GnRH immunisation on weaner stag growth and antler development.
 - Liquid nitrogen suppression of pedicle/antler development: Promising developments with sika deer in China, small-scale trials being conducted at Invermay on red deer.
 - Genetics of late pedicle initiation: Phenotype recording of male weaners on Landcorp nucleus herds underway.

Objective 2: Focus farms/parasitology

- Attendance at all four focus farms has been good (>400 for the first round of meetings).
- A survey of the recently concluded SFF Focus Farms showed a high level of uptake and changes made following field days or reading the newsletters.
- A “replacement” PhD student is expected to commence study by 3/09/2008 and undertake the second parasitology trial in January 2009.

Objective 3: Extensive system benefits

- Interviews with 20 high-country deer farmers are being organised for December 2008 (to document perceived benefits and challenges).
- GPS study (how deer distribute themselves over a paddock/farm/area) has been completed and data currently analysed.

- Urine sensor project has been terminated and funds will be re-invested (possible areas are to change Objective 3 from extensive systems to effects of land-use change on venison supply systems, or add a component to Objective 1 on reproductive performance of yearling hinds and efficiency measures in adult hinds.

Venison Research Proposal

- Endorsement of the VPTC for the proposal to look further into drip loss and water holding issues and linked to spray chilling was noted. K Ashby noted that a rough calculation of the benefit to industry was \$1.2 million *per annum*. \$50,000 for one year will be matched by \$50,000 from an AgResearch FRST-funded programme looking at beef quality.
- The Board approved funding of \$50,000 (exc GST) for 2008/09.