



Summary of the 18th Board Meeting of DEERResearch Ltd
**Wednesday 25 April 2007, AgResearch Ltd (Invermay Agriculture Research
Centre, Puddle Alley) Mosgiel**

AGENDA

1. Apologies
 2. Minutes of the Previous Meeting (18 April 2007)
 3. Matters Arising
 4. Register Update
 - A. Interests
 - B. Intellectual Property
 5. Financial Report
 6. 2006/07 Research Updates
 7. Massey Deer Research Unit
 8. Johne's Disease Research Submission
 9. DEERResearch co-funding payment schedule for the Venison Supply Systems programme
 10. General Business
 - a. NZSAP sponsorship
 11. Suggested Meeting Dates and Calendar of Key Events
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Present

- C Isaacs (Chairman), N Beatson, P Benfell, M Buick, F Griffin, G Keeley, T Pearse (for M O'Connor)

Apologies

- M O'Connor

Attending

- L Fung (DINZ), G Asher and J Archer (AgResearch, for Agenda Item 9)

Matters Arising

- 06/07-9: *List of research on Market Access and Development.* Full list of M&WNZ research projects obtained. Relevant projects will be identified and forwarded to the Board and VPTC. Ongoing.
- 06/07-19: *Prepare licence agreement for DEERselect.* Awaiting decision on ownership of software. Ongoing.
- 06/07-32: *Clostridia test kit – obtain costings for further work.* AgResearch require some indications from processors as to how the test kit would be used: In-plant diagnostic tool or as a testing service provided by AgResearch. Purpose of use is also important in developing costings: monitoring levels within DSP (following clean-up), downgrading contaminated meat or diverting to appropriate market, quality assurance for markets.

Research Update

Status of projects following Board discussion as follows:

Brief Title	Status	Budgeted Funds	Due End Date	Client Report
New Technologies for Wealth Creation				
1.16 Pastoral genomics	Ongoing	\$30,000	Jun 2012	
Deer Health and Welfare				
6.03 Johnes disease vaccination	Finished	\$75,000	Jun 2007	Dec 2007
4.02 Johnes disease epidemiology	On-track	\$90,100	Jul 2008	Jul 2008
6.04 Internal parasitism	Finished	\$60,000	Jun 2007	
Sustainable Production / Environment				
1.03 Methane mitigation	Ongoing	\$35,000	Jun 2009	
4.12 Diets to reduce greenhouse gas emissions	Finished	\$3,000	Apr 2007	
4.04 Stream recovery	Finished	\$10,000	Jun 2007	✓
4.06 OVERSEER for deer	Finished	\$25,000	Jun 2007	Dec 2007
Productivity Gains				

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4.10 Strategies to achieve early calving	Delayed	\$40,000	Jun 2007	Dec 2007
5.04 What controls gestation length in first-calving hinds?	Finished	\$15,000	Jun 2007	✓
6.01 The early-breeding gene hypothesis	Ongoing	\$100,000	Jun 2008	Jun 2008
6.05 Breeding values for elk and wapiti	Delayed	\$25,000	Jun 2007	Sep 2007
6.06 Economic indices for deer selection	Finished	\$10,000	Jun 2007	✓
6.08 Integrated livestock systems	Delayed	\$40,000	Jun 2007	
Market Access and Development				
6.02 Pre-skinning interventions for "blown pack" control	Finished	\$85,000	Jun 2007	✓
6.07 Muddy deer and wintering systems	Ongoing	\$19,000	Dec 2007	Dec 2007
Accelerated Learning, Technology Transfer				
5.06 Forage Master workshops	Delayed	\$3,750 ^a	-	
Support for Post-grads				
6.09 CT scanning for study of gastro-intestinal development of young deer	On-track	\$8,000	Feb 2008	Feb 2008
		\$670,100		

A number of projects have finished and approval for sign-off was sought from the Board.

Project 6.04: Internal parasitism (Approved)

Project will continue under the Venison Supply Systems (VSS) programme. Work to date appears to be progressing well although there are signs of anthelmintic resistance in both Massey and Hinton herds.

Project 4.04: Stream recovery (Approved)

- Fencing-off significantly improves water quality for nitrate and ammonium nitrogen, particulate and total phosphorus and suspended solids, but not for *E. coli* or dissolved reactive phosphorus.
- Improvements are due to settling out of some contaminants in planted areas and removal of direct inputs from the deer.
- Fencing-off and planting is an expensive exercise but may be cost-effective where there is a large catchment area relative to the receiving waterway.
- The effectiveness of a fenced-off/planted area for settling out contaminants will have a limited lifespan.
- Other factors that will limit the effectiveness include how quickly deer re-establish wallowing in other parts of the catchment, topography, soil type and climate.

Project 4.06: OVERSEER for deer (Approved)

Improvements for deer have been identified and major changes will be incorporated into a release of an overall upgrade of OVERSEER due for release in December 2007.

Project 4.10: Strategies to achieve early calving (*Payment withheld*)

Data for all three years will be analysed and a final report will be submitted by December 2007.

Project 5.04: What controls gestation length in first-calving hinds? (*Approved*)

- The study investigated two hypotheses: 1) Early-conceiving hinds will have longer gestation lengths while late conceiving hinds will have shorter gestation lengths (i.e. conception date is relatively stable); 2) Yearling hinds invest more energy into their growth than adult hinds and so have a longer gestation length.
- Gestation length is influenced by conception date, supporting the first hypothesis, however for every 10 days of advancement in conception date there will still be between 6-8 days advancement in calving date.
- Yearling hinds exhibited *shorter* gestation lengths than adult hinds by 2.2 days; this does not support the second hypothesis.
- The mechanism(s) by which deer either optimise birth weight or birth date are not understood, although photoperiod is suggested as being a strong influence. However from an on-farm management perspective there is only minimal scope to modify environmental conditions to advance calving dates.
- Genetic factors that influence reproductive seasonality appear to be more likely to achieve advanced calving dates.

Project 6.05: Breeding values for elk and wapiti (*Payment withheld*)

This project will be delayed until approximately mid September 2007.

Project 6.06: Economic indices for deer selection (*Approved*)

- A spreadsheet-based model has been developed which has separate selection indices for breeding programmes that supply breeding stags to different production systems: early kill, late kill and terminal sire.
- Growth rate is important for early kill and terminal sire production systems.
- Carcase composition, maternal reproduction ability and fawn survival are important in late kill production systems
- Accuracy of breeding values (BVs) that make up an index will be an issue that can affect the usefulness of the indices or allow artificial manipulation of the system.

The next step is to present the report to the DEERSelect Committee and then implement the indices in DEERSelect if approval is obtained.

Project 6.08: Integrated livestock management (*Payment withheld*)

Project will continue under the VSS programme. Some delays have been experienced with development of reliable urine sensors.

Project 6.02: Pre-skinning interventions for “blown pack” control (Approved)

- Only one commercial wash product was more effective than a water wash at reducing *Clostridia* spores from deer pelts (out of four commercial products). The reduction was most likely due to physical removal of the spores rather than killing spores.
- The reduction although significant does not suggest that the resulting level would be a ‘safe’ level to prevent *Clostridia* spores from contaminating venison in a DSP.
- However it may still have use when used in combination with other management measures (i.e. it is one step along a series of control measures that will incrementally reduce spore levels).

Massey Deer Research Unit (DRU)

Issue: DRU seeking one year’s bridging funding after commercial funding has been withdrawn.

The Board recommended that DEEResearch provides partial funding and that the DINZ Science Manager assist the DRU to seek additional matching funding from AgMARDT.

Johne’s Disease Research Submission

DEEResearch has committed \$100,000 *per annum* to the Johne’s disease Research Consortium (JDRC), of which \$92,000 is allocated to Project 4.02: Johne’s disease epidemiology for 2007/08.

As the JDRC has yet to officially commence (awaiting FRST approval of governance composition), existing FRST contracts continue to roll-over. However the corresponding industry money has yet to be committed (and is therefore unable to be allocated for payment).

While DEEResearch can not fund the co-funding shortfall, it could undertake quarterly payments for ongoing deer studies until the JDRC is operational and then recover these payments from either AgResearch or JDRC. This would be dependent upon:

- The proposed work having been fully budgeted and costed in the JDRC science plan and budget.
- The ability for DEEResearch to recover payments from either AgResearch or JDRC.
- Sufficient unpaid DEEResearch funds at time of invoicing.

DEEResearch co-funding payment schedule for the Venison Supply Systems programme

Approximately \$1.9 million (GST inclusive) *per annum* for six years was sought from FRST, and \$1.5 million (GST inclusive) *per annum* for six years was awarded, but FRST would not support research in Objective 4 (venison processing) or the water-borne contaminants work in Objective 3.

With the gap in venison processing research, DEEResearch may seek to re-allocate some of the co-funding to directly fund clostridia work. It was noted that the NZDFA strongly supported this venison processing research in the original proposal.

On a pro-rata basis from the original proposal, \$52,000 (GST exclusive) of DEEResearch funds would have been allocated to Objective 4, and \$19,000 (GST exclusive) is currently contracted to a project that forms part of the water-borne contaminant milestones for Objective 3 (contract finishing on 31 December 2007).

Milestones were reviewed by the Board and were considered sufficient for the programme leaders to proceed with other budget allocation and programme planning.

Suggested Meeting Dates and Calendar of Key Events

- Next meeting October July 2007 by teleconference (date to be confirmed).
- 24 October 2007 – NZDFA Branch Chairs meeting in Wellington
- 20 February 2008 (VSS Governance Group) in Wellington