DEER esearch

ANNUAL REPORT 1 JULY 2013 – 30 JUNE 2014

FROM THE CHAIRMAN

While this report presents DEEResearch's research and expenditure during 2013/14, I believe the most important thing the Board did this year was to commission a review of its flagship programme of recent times.

Many of you will be familiar with the letters 'VSSP', which is DEEResearch shorthand for the Venison Supply Systems Programme led by AgResearch at Invermay. This was DEEResearch's main investment between 2009 and 2013 and was structured and managed in a similar way to DEEResearch's current major project ('Hitting Targets for Deer Industry Profitability' or 'Hitting Targets'), so we thought a review of its management and outcomes would be a good platform for refining our management of Hitting Targets.

Adoption of science

In considering the observations and recommendations in the review, DEEResearch noted that we are, first and foremost, a research organisation. Nevertheless we accept that without good systems for farmer adoption, our research investment is hamstrung. We recognise that researchers have a part to play in adoption and have made changes in DEEResearch to reflect that. DEEResearch has the support of AgResearch on this.

There were no major surprises in the outcome of the review. DEEResearch had itself already identified some of the recommendations for improvement and started addressing them, for instance, the need for research proposals to clearly identify adoption pathways. This was not a new concept to DEEResearch, but a longstanding requirement that had not been consistently complied with in recent years.

Focus on outcomes

COLLIER ISAACS

The review also recommended that DEEResearch measure project success in terms of whether outcomes resulted from research, rather than simply whether incremental project milestones were met. In fact both of these are important for ensuring that commissioned research gets carried out and that it is work that delivers benefits to the deer industry. Measuring outcomes and attributing them to particular investments is a difficult challenge faced by all commissioners of research, but DEEResearch will carefully consider its options in this regard.

Links with Passion2Profit

A significant part of of DINZ's Passion2Profit strategy (P2P) is focussed on putting in place good quality systems for farmer adoption. There is a huge stockpile of knowledge on the DEEResearch website (including published papers), on the DINZ Deer Hub and in our researchers' heads, and work under P2P will be done to turn this knowledge into solutions and profits on farms. However, Hitting Targets itself includes a number of new initiatives aimed at working in better with P2P and promoting adoption and practice change, including greater involvement with focus farms, new on-line tools and engagement with Advance Parties.

The VSSP review pointed out that the best examples of science adoption were DEERSelect and Johnes Management



Limited, where industry created a system and a 'champion' to turn the science into a usable and profitable solution onfarm. DEEResearch will support P2P's industry champions for other aspects of deer farming science, who will take responsibility for turning that science into farmer profit.

People and partnerships

The gratitude of the DEEResearch Board and its researchers is extended to deer industry partners who have been involved in deer research by provision of data or herds to survey. In particular, this year our thanks go to the 96 farms that collected pregnancy scanning data for foetal wastage studies and staff on the DPT project's farms (AgResearch Invermay, Whiterock Station, Canterbury and Haldon Station, Mackenzie). Along with the DPT Partner herds who diligently collected a great deal of data, the DPT farms tolerated considerable disruption to their normal processes to ensure that the right stock were managed in the right way at the right time. We are also aware of the extraordinary amount of planning and fieldwork put in by AgResearch staff to deliver this project in addition to considerable operational support from staff at Alliance's Makarewa plant.

The DPT project has now moved into a new phase of data analysis. DEEResearch and the wider deer industry are excited about what that will reveal and looks forward to its outcomes being able to contribute a great deal to the genetics component of P2P.

Board

Shortly after the year end, Dr Jason Archer retired from the Board upon his move from AgResearch to AbacusBio. Jason provided scientific insights of the highest quality to the Board, always through a practical, industry-focussed lens. The Board wishes him well at AbacusBio and hopes his longstanding connections to deer industry science will endure. We welcome AgResearch's new representative on the Board, Dr Glyn Francis, who has close oversight of AgResearch's deer scientists.

Collier Isaacs, Chairman



ACCOUNTS

A full set of audited financial statements and the accompanying audit report is provided at the end of this report.

RESEARCH PROGRAMME HIGHLIGHTS

A summary of DEEResearch projects in the 2013/14 year is provided in Table 1 and reports on project progress are provided in Table 2.

Hitting Targets for Deer Industry Profitability

2013/14 was the first year of Hitting Targets for Deer Industry Profitability project ('Hitting Targets'), the largest of the DEEResearch projects. Hitting Targets is undertaken by AgResearch and its contractors, such as Massey University.

Environmental research re-entered the programme this year after a lengthy absence, since DEEResearch recognised the weight of regulatory and market drivers for deer farming being environmentally sustainable.

Other projects

Besides Hitting Targets, DEEResearch continued to invest in small, tactical venison-focused research projects and larger pan-pastoral research consortia. In particular, 2013/14 saw the second and final year of co-funding the Massey University-led project to determine the incidence and prevalence of foetal wastage. DEEResearch keenly awaits final reporting, to be shared with industry participants in due course.

DEEResearch, through the New Zealand Deer Farmers' Association invested in a new Johne's disease-focussed project undertaken by Otago University's Disease Research Laboratory led by Prof. Frank Griffin. This project aims to develop a test for commercial use to identify where on the Jd resistant-susceptible spectrum an individual deer lies. The test will be an *in vitro* analysis of multiple intra- and inter-cellular molecular responses of a deer blood sample to disease simulation, on account of disease commonly being the result of disruption to multiple molecular pathways rather than the product of a single gene anomaly.

2014/15 PROGRAMME

A summary of projects in the current year are provided in table 3.

DIRECTORS

As at 30 June 2014 the Board of DEEResearch Ltd. comprised:

Collier Isaacs (independent Chairperson appointed by the other directors)

Jason Archer (AgResearch) (now Glyn Francis)

Noel Beatson (New Zealand Deer Farmers' Association)

Dan Coup (Deer Industry New Zealand)

Tim Carpenter (Tertiary Education Institutions)

Danny Hailes (Venison Processors, Exporters and Marketers)

Tom Richardson (AgResearch)



SUMMARY OF DEERESEARCH PROJECTS IN 2013/14

TABLE 1

	SHORT TITLE	PERIOD OF PROJECT	FUNDING (\$K)		
			Total	DINZ	AgR
Pan-sector consortia	Methane mitigation through Pastoral Greenhouse Gas Research Consortium	2002 - 2015	5,410 p.a.	35 p.a.	800 p.a. (350 p.a. to 2012)
	Pastoral Genomics through Pastoral Genomics Research Consortium	2002-2014	5,860 p.a.	34 p.a.	125 p.a.
	Johne's Disease through Johne's Disease Research Consortium	2008-2013	- 1	- 2	_ 3
Industry-led productivity	Venison Supply Systems Programme (lead contractor being AgResearch)	2007-20134	-	60 5	-
	Hitting Targets for Deer Industry Profitability	2013-2018	1,708	408	1,300
Other	Foetal Wastage	2012-2014	270 °	40*	*
	Molecular markers for resistance or susceptibility to Johne's disease	2013-2015	250 p.a.	80 p.a. ⁷	
	VSSP review	2013/14	16	16	-
	Dose-dependent anthelmintic studies	2013/14	35	35	-
Total			Unknown	577	-

¹ The Consortium remains in existence and DEEResearch remains an equitable owner. However, the Consortium's work is financed through its owners' and the Crown's capital contributions made in and prior to the 2012/13 year. The Consortium continues to undertake projects of benefit to the deer industry and other primary sector industries.

² ibid

³ ibid

⁴ Some unfinished projects continued into 2013/14

⁵ Accrued from unfinished milestones in 2012/13

⁶ A further \$120K of the total \$270K is derived from DEEResearch indirectly through AgResearch's sub-contracting of Massey under the Venison Supply Systems Programme and Hitting Targets for Deer Industry Profitability Project.

⁷ \$125k p.a. funding from the Crown through a Technology Transfer Voucher and \$45k p.a. through the NZDFA/NZDFA branches and associates.



DEERESEARCH PROJECT PROGRESS IN 2013/14

TABLE 2

SHORT TITLE	PURPOSE	PROGRESS BY 30 JUNE 2014
Methane mitigation	Identify, establish and develop on-farm technologies to improve production efficiency for ruminants	Commercialisation plan reviewed and considered fit- for-purpose.
	 Identify, establish and develop on-farm technologies for sheep, dairy, beef cattle, and deer, which lower methane emissions from New Zealand ruminants and nitrous oxide from grazing animal systems Exploit commercial opportunities arising from the science and technologies in a global market 	• Animal Genetics: Rumen microbial profiles are different between High and Low methane sheep; this will be further evaluated to determine if it could be used as a basis of selection across sheep, cattle and deer. The programme will be strongly focusing on cattle and move onto deer only after an appropriate
	Science and technologies in a global market	 Low GHG Forage: Evaluation of Rape and Brassicas is continuing, research into cause of Rape's lower emissions is also continuing.
		• Methane Vaccine: Preparation for a prototype vaccine animal trial in early 2015 is continuing. Proof of Concept of a vaccine is required by June 2015, with a view to engageing a commercial partner.
		• Methanogen Inhibitors: Two lead inhibitors that are 90-100% effective in rumen fluid-based lab trials have been identified for evaluation in animal trials. The programme has established a sound process for evaluating the inhibitory activity of <i>in vivo</i> substances against unique methanogen enzymes within a rumen methanogen.
Pastoral Genomics	 Provide NZ pastoral farmers with a long-term competitive advantage through the availability of more productive, sustainable forages produced through selection of untapped genetic potential in pastoral plants 	Science Development of- industry-leading ryegrass and clover genetic maps world-leading genomic and gene expression databases one-hybrid assay capability in clover novel drought-resistant clover hybrid multiple mapping populations in NZ forage species
		 Commercial Partnerships established for proof-of principle testing of conventional and marker-assisted selection approaches Gene outlicensing Trials of trait enhanced forages underway Licensed marker maps produced for international distribution

SHORT TITLE	PURPOSE	PROGRESS BY 30 JUNE 2014
Johne's Disease	Provide tools for the New Zealand farming community and livestock industries to improve control of Johne's Disease ('Jd') across the sheep, beef, deer and dairy industries.	 JDRC On-farm Deer study being managed by Abacus Bio Ltd and undertaken in collaboration with Johne's Management Limited Completed a survey of 151 deer herds to investigate link between Jd suspect-lesion rate and the on-farm impact of JD. Second year of sampling was completed for the diagnostic study, which is being undertaken to provide a better understanding of the application of diagnostic tests for the management of Jd in deer The Johne's Advisory Group (JAG) (a cross sector, multidisciplinary expert panel providing advice to the JDRC Board regarding research and the uptake and application of science and management techniques for Jd in NZ) reviewed media and science reports, Jd research priorities for industry and considered issues around effluent management and Jd vaccination.
Venison Supply Systems	Improve the biological and economic efficiency of the venison industry, thereby enhancing long-term financial and environmental sustainability	See following sub-project reports
Deer Systems Modelling	Understand the profitability relationships between different stock enterprises based on changing stock performance to aid in exploring the impacts of the PIP industry targets on the on-farm requirements.	 Developed a linear programme whole farm research model that includes deer, sheep and beef enterprises to evaluate the effects of different production targets on profitability. A paper on the development of the model was delayed'. Live weight and reproductive data from research, farm benchmarking and allied providers were compared with current practice to help define production targets for the model. The profitability of changing the growth rate of young stock and changing the reproductive rate of deer by comparison to similar changes in the competing sheep enterprise in a farm systems context were reported and a paper to the New Zealand Grassland Association on the practical implications of interactions between competing stock enterprises on changing stock performance was submitted.
Hitting Targets for Deer Industry Profitability	Assist the deer industry to achieve improved productivity, profitability and sustainability.	See following individual sub-project reports
Achieving Productivity Targets	Develop farm systems that will meet the productivity targets of the future industry.	Feed supply scenarios have been tested against P2P productivity targets and a report provided advising on the options for altering feed supply and the impacts on productivity and profitability
Managing Water Quality in Hill and High-Country Deer Systems	Develop hill-country deer farming systems that optimise profitability while meeting obligations around sustainable land-use	 Re-survey of vegetation changes occurring under deer grazing at White Rock Station field work completed, but report delayed. Information on high-country deer farming produced for the Deer Hub Water quality research plan: Discussions with stakeholders indicate that self-feeding silage pits is a potential knowledge gap. Stakeholder priorities for environmental research ascertained. Delivery of desktop modelling of nutrient/contaminant flows for a range of commonly used deer self-feeding silage systems was deferred.
Adoption and Practice Change	Focus Farms and associated adoption/practice change activities are an effective conduit for the NZ deer industry to achieve its targets for improved profitability, with a particular focus on improving weaner growth. The Advance Party model is optimised as a delivery means to encourage profitable practice changes.	Existing learning packages were updated in accordance with industry guidelines. New modules for an 'Improving Weaner Growth' learning package were developed although one remained outstanding. A review of existing information and methods/initiatives for dissemination of the information was undertaken.

SHORT TITLE	PURPOSE	PROGRESS BY 30 JUNE 2014
		Advance Party practice change study: A survey of the members of several Advance Parties on initial aspirations, motivations and constraints towards practice change, and deer operation profitability status was completed
Seasonal Growth Pathways	Availability of means for genetic selection (i.e. breeding values or indexes) for genotypes with growth patterns that maximise venison production within specific climatic and feed-production environments without compromising other important traits (e.g. venison quality and carcass attributes).	Forages review : A review was completed of the responses of deer to the range of pastures and forage crops available in NZ, with recommendations of areas of potential research and/or practice change opportunities. Practical advice for producers arising from review has been placed on DINZ's Deer Hub.
		Genetic outliers: Analysis of weaner liveweights throughout their first 12 months showed that some sires produced progeny that provided growth advantages at different times of the year. There were stags whose progeny had different seasonality characteristics, but still had similar 12 month live weights. Other stags produced progeny whose growth characteristics differed.
Physiology of Puberty	The effects of early-life (pre- and post-natal) growth on body tissue composition and entry into puberty are understood.	Field work to measure growth, blood sampling to measure reproductive hormones, and a tritium treatment to measure total body composition was done. Plasma tritium analyses and chemical analyses of body composition were completed.
Managing Deer Parasites	The deer industry is able to effectively and efficiently manage the clinical and subclinical impacts of parasitism to improve weaner survival, optimise growth performance and hence overall health and welfare.	 Five science journal papers on deer parasitology were submitted for publication. A pharmacokinetic study was completed Deer Hub module developed on outcomes of parasite research Parasite cross-grazing study: First year field and laboratory work completed; study report and article in VetScript ensued. Study on effects of mineral additives on oral ML anthelmintic efficacy: First year field work completed. Cattle parasites in deer: Study initiated.
		Nation-wide monitoring of anthelmintic resistance: Planning for next year's activity completed. Advance Party practice change study: A survey of the members of several Advance Parties on initial aspirations, motivations and constraints towards practice change, and deer operation profitability status was completed
Toxoplasma Vaccination	Efficacy of Toxoplasma vaccination in reducing foetal wastage in R2 hinds is determined.	First year of trial work completed and reported.
Deer Progeny Test	Improve linkage between breeder herds and the ability to analyse animal performance across herds and breeds. Second-order objective is to provide a post-research (Beta- testing) platform where animals may be assessed for novel industry-relevant phenotypes before module development in DEERSelect.	Completion of second year of phenotype recording of i) terminal progeny live and carcass traits and ii) maternal traits of maternal lines Report on meat quality and co- product traits of 2012-born DPT progeny delayed. It will combine data for 2011 and 2012-born progeny and review the utility of ultrasound scanning in relation to carcass measurements.
DEERSelect	Operate, maintain and develop the platform by which genetics information is stored, analysed and disseminated to the deer industry.	 On-line tutorial and associated field handbook developed on foetal ageing for up-skilling scanning operators. Module implementation: The use of gBreed in DEERSelect was postponed through data limitation Development of quarterly reports providing relevant and timely information on DEERSelect activity to DEERSelect data providers. Development of formal monitoring tools e.g. on linkage and genetic trends. Assistance provided for review of animal ID recording and the integration of NAIT Tags into DEERSelect. Revised DEERSelect indices to address industry concerns about technical and useability limitations

SHORT TITLE	PURPOSE	PROGRESS BY 30 JUNE 2014
Genomics	SNPs of greatest utility to the deer industry are identified to enable third parties to improve the efficiency and accuracy of tools for parentage assignment and breed assignment; development of species/sub-species forensic tools to identify in-market substitution and adulteration of venison and velvet labelled as of New Zealand deer farm origin.	Determined readiness for implementation of useful SNPs for breed assignment and parentage: NZ breeds appear to be easily identified but not other breeds and there is a strong indication that parentage can be reliably tested for NZ deer subject to further validation.
DEERLink	Ensure that DEERSelect maintains an acceptable standard of sire linkage between large enough numbers of deer to form a database capable of supporting industry-wide genetic improvement. To provide an ongoing platform to assess the heritability of meat traits and maternal traits of commercial importance to the deer industry and, where appropriate develop means of trait reporting, undertaking genetic analysis, breeding value calculation and inclusion of such breeding values in multi-trait indices.	Sires (7) and hinds (no fewer than 400) identified for use in 2014 AI programme. AI programme completed. Conception rate of inseminated hinds determined by ultrasonography.
Improving OVERSEER for deer	The deer industry is able to adjudge the fitness-for-purpose of Overseer as a nutrient budgeting tool in deer-only and integrated farming systems and make technical recommendations for any required improvements.	Delayed delivery of a review of Overseer sub-models with deer specific calculations and mitigation tool options, scope for refinement and significance of impact and, priority areas for further work.
Foetal Wastage	Determine the incidence and prevalence of foetal wastage and develop and/or apply serum diagnostic tests for potential pathogenic causes of foetal wastage.	Incidence and prevalence studies completed and reported on at Conference. Final report awaited.
Molecular markers for resistance or susceptibility to Johne's disease	Identify a panel of biomarkers to be used in a laboratory assay to discriminate between animals that would display a Susceptible, Intermediate or Resilient phenotype following <i>Map</i> infection.	Biomarkers have been selected and tested, but some technical issues regarding scaling down the test sample size are yet to be resolved.
VSSP review	 To determine If the VSSP's objectives were met; reasons for objectives not being met or being exceeded; the value created for the deer industry by the VSSP; learnings for future research programme governance. 	Review completed identifying low rate of adoption as a major impediment for the programme and industry
Dose-dependent anthelmintic studies	 Determine the efficacy of moxidectin against Oster-type gastrointestinal parasites on a farm whose previous resistance to Moxidectin in the treatment of such parasites was quantified in 2010; appropriate dose rate of Oxfendazole for deer against Oster-type nematodes; appropriate dose rate of Levamisole for deer against Oster-type nematodes. 	 Study completed whose principal findings were that: level of Ostertagia-type resistance to moxidectin is greater than 3 years ago; Oxfendazole in anthelmintic combinations for deer should be at least 13.6 mg/kg; and Levamisole has an effect against gastrointestinal parasites in deer; a 2.5 times standard dose rate had an efficacy of 40% with no attendant safety concerns. Further studies necessary to determine dosage required for optimum efficacy within safety limits.



A SUMMARY OF DEERESEARCH PROJECTS IN 2014/15

TABLE 3

TYPE OF INVESTMENT	SHORT TITLE	PERIOD OF PROJECT	DINZ 2014/15 CONTRIBUTION (\$K)
Pan-sector consortia	Methane mitigation through Pastoral Greenhouse Gas Research Consortium	2002 - 2015	35
	Pastoral Genomics through Pastoral Genomics Research Consortium and PG+	2002 - 2015	34
	Johne's Disease through Johne's Disease Research Consortium	2008-2016	-
Industry-led productivity	Venison Supply Systems Programme (lead contractor being AgResearch)	2007-20138	18.79
	Hitting Targets for Deer Industry Profitability	2013-2018	439.710
Other	Molecular markers for resistance or susceptibility to Johne's disease	2013-2015	8011
	Parasitology research summit	2015	3

⁸ Some unfinished projects continuing into 2014/15

- ⁹ Accrued from unfinished milestones
- ¹⁰ Includes \$31.7 accrued from unfinished 2013/14 milestones

¹¹ \$125k p.a. funding from the Crown through a Technology Transfer Voucher and \$45k p.a. through the NZDFA/NZDFA branches and associates.



DEEResearch Limited

STATEMENT OF FINANCIAL PERFORMANCE

For the year ending 30 June 2014

			2014 \$	2013 \$
Research Income Deer Industry New Zealand Research Trust Deer Industry New Zealand Research Trust Deer Industry New Zealand Research Trust DPT Funding AgResearch Limited	- Research Joint Ventures - Research Other - Project Management		69,000 561,776 53,878 85,000 1,367,000	169,000 363,147 54,450 80,000 1,458,000
Other Income - Administration Funding Deer Industry New Zealand AgResearch Limited Sundry Income			17,324 17,324 -	14,296 14,296 -
Total Income			2,171,302	2,153,189
Less Expenditure				
Research Expenditure Funded by FRST through AgResearch Research Projects - Joint Ventures	Methane Mitigation Pastoral Genomics Johne's Disease	35,000 34,000	1,367,000	1,458,000
HTDIP (refer to attached schedule) Research Projects - Other			69,000 418,081 143,695	169,000 343,147 20,000
AgResearch share of DPT Funding Administration Costs DPT Funing			85,000	75,000 3,513
Project Management			53,878	54,450
Total Research Expenditure			2,136,654	2,123,115
Administration Expenditure Director's Fees and Expenses Audit Fees Accounting Fees Sundry Expenses			8,551 8,778 11,423 3,227	7,291 8,930 8,467 1,779
Total Administration Expenditure			31,979	26,467
Communication Expenditure Annual Report			2,669	2,125
Total Communication Expenditure			2,669	2,125
Total Expenditure			2,171,302	2,151,707
Net Result Before Taxation and Interests	in Joint Ventures		-	1,482
Interests in joint ventures Deficit/(Surplus) from Unincorporated Join	t Ventures		52,653	(96,560)
Taxation				
Net Result After Taxation			(52,653)	98,042

These Financial Statements should be read in conjunction with the notes to the Financial Statements.

DEEResearch Limited

STATEMENT OF MOVEMENTS IN ACCUMULATED FUNDS

For the year ending 30 June 2014

	2014 \$	2013 \$
Opening Accumulated Funds	221,793	123,751
Net Result After Taxation	(52,653)	98,042
Total Recognised Gains and Losses	(52,653)	98,042
Closing Accumulated Funds	169,140	221,793

STATEMENT OF FINANCIAL POSITION As at 30 June 2014

	2014 \$	2013 \$
Share capital Retained earnings	120 169,020	120 221,673
Accumulated Funds	169,140	221,793
Represented by:		
Current Assets Short Term Bank Deposits Accounts Receivable Share Capital Due	1,345 209,736 120	16,388 162,080 120
Total Current Assets	211,201	178,588
Current Liabilities Accounts Payable Related Parties Payables	54,153 151,970	19,873 153,637
Total Current Liabilities	206,123	173,510
Non Current Assets Share of Assets of Pastoral Genomics Research Consortium Share of Assets of Pastoral Greenhouse Gas Research Consortium Share of Assets of Johne's Disease Research Consortium	21,460 35,515 176,640	29,760 55,020 201,350
Total Non Current Assets	233,615	286,140
Non Current Liabilities Share of Liabilities of Pastoral Genomics Research Consortium Share of Liabilities of Pastoral Greenhouse Gas Research Consortium Share of Liabilities of Johne's Disease Research Consortium	22,470 26,563 20,520	17,120 47,625 4,680
Total Non Current Liabilities	69,553	69,425
Net Assets	169,140	221,793

These Finandal Statements were approved and signed on behalf of the Board of Directors by:

Director	21st November 2014
Director	
Dil c. f. Director	21/11/14

These Financial Statements should be read in conjunction with the notes to the Financial Statements.

DEEResearch Limited

NOTES TO AND FORMING PART OF THE FINANCIAL STATEMENTS

For the year ending 30 June 2014

Reporting Entity

These are the financial statements for DEEResearch Limited, a company registered under the Companies Act 1993 and incorporated on 20 August 2001. The shareholders of DEEResearch Limited (the 'Company') are AgResearch Limited ('AgResearch') (50%) and Deer Industry New Zealand ('DINZ') (50%). The objectives of the Company are to research non-velvet related deer products.

The shareholders have agreed to work together and apply their respective capacities for their mutual benefit and the benefit of the New Zealand deer industry . In particular, the shareholders will participate on a long-term basis in research and development relevant to deer farming and processing of deer products except velvet antler.

In addition to deer research conducted by AgResearch, funding of agreed research projects is made by application to the Deer Industry New Zealand Research Trust.

Administration and communication costs are shared by AgResearch and DINZ.

The financial statements comply with generally accepted accounting practice in New Zealand.

1. Statement of Accounting Policies

(a) General Accounting Policies

The general accounting principles recognised as appropriate for the measurement and reporting of earnings and financial position on an historical cost basis are followed by the Company. Reliance is placed on the fact that the Company is a going concern as it is supported by its shareholder entities (AgResearch and DINZ).

The going concern assumption is dependent on the continuing financial support of the shareholder entities. The shareholder entities have undertaken to continue to provide financial support to the Company for the foreseeable future, which is not less than 12 months from the date of these financial statements.

(b) Particular Accounting Policies

The following particular accounting policies which materially affect the measurement of profit and the financial position have been applied:

Income

Income comprises of funding of research and administration expenditure. This is accounted for on an accrual basis.

Differential Reporting

The Company qualifies for differential reporting and is entitled to certain exemptions from the financial reporting standards as it complies with the following criteria:

- i. The Company is not publicly accountable; and
- ii. The Company is not considered to be large according to the criteria set out in the Differential Reporting Framework.

The Company has taken full advantage of the exemptions available under the framework except for FRS 19: Accounting for Goods and Services Tax.

Interests in Joint Ventures

The Company holds a direct interest in three unincorporated joint venture consortiums (the 'Consortiums'), which are Pastoral Greenhouse Gas Research Consortium 1.4% holding (2013: 1.5%), Pastoral Genomics Research Consortium 1.0% holding (2013: 1.0%) and Johne's Disease Research Consortium 12.0% holding (2013: 12.0%) respectively. The interests in the unincorporated joint ventures have been accounted for using the proportionate method.

The unincorporated joint ventures have a balance date of 30 June 2014.

GST

These financial statements are prepared on a GST exclusive basis, except for Accounts Receivable and Accounts Payable which are on a GST inclusive basis.

Income Tax

The income tax expense charged against the profit for the year is the estimated liability in respect of that profit and is calculated after an allowance for permanent differences.

Future tax benefits attributable to tax losses or timing differences are only recognised when it is probable that taxable profits will be available against which the tax losses or timing differences can be utilised.

Research

All research costs incurred by the Company during the year have been expensed.

Accounts Receivable

Accounts receivable are stated at expected realisable value.

(c) Changes in Accounting Policies

There have been no changes in accounting policies during the year.

2. Share Capital

	2014	2013
120 ordinary shares (unpaid)	\$120	\$120

All shares have equal voting rights and share equally in dividends and surplus on winding up.

3. Related Parties

Transactions with related parties comprise funding of research and administration expenditure from DINZ (shareholder), AgResearch (shareholder) and Deer Industry New Zealand Research Trust (a Trust controlled by DINZ). In addition payments totalling \$418,081 (2013: \$343,147) were paid to AgResearch to carry out agreed research projects during the year ended 30 June 2014 on behalf of the Company under the 'HITDIP' and VSS programmes. All transactions with related parties were conducted on an arm's length basis.

Funding contributions of \$35,000 and \$34,000 were made to Pastoral Greenhouse Gas Research Consortium and Pastoral Genomics Research Consortium during the year to 30 June 2014 (2013: \$35,000 and \$34,000 respectively). No funding was made to Johne's Disease Research Consortium during the year ending 30 June 2014 (2013: \$100,000).

4. AgResearch Limited research income contribution to the Company

In addition to research funded directly by the Company, AgResearch also invests in research relevant to the deer industry.

AgResearch's contribution to the Company is via their Core Funding contract with the Crown, the benefit of which is vested in the Company. The revenue and expenditure related to this funding is reflected in the financial statements of the Company and is also accounted for within AgResearch.

While AgResearch consults with the deer industry and with the Company in the development of these funding proposals, the Company does not have control of nor responsibility for activity as part of this programme.

During the year to 30 June 2014, AgResearch carried out a deer (non-velvet) research programme to the value of \$1,367,000 (2013: \$1,458,000) which was funded from their Core Funding.

5. OPT Funding

The Deer Progeny Test Project is part of the Company HITDIP programme. In December 2011, the Company, AgResearch and other parties signed a MOU allowing for external co-funding for this project.

6. Commitments

The following funding arrangements have been made by the Company subject to milestones being achieved. These commitments are as follows:

Contracted	2014 \$	2013 \$
Not later than one year	541,653	120,000
Later than 1 year and not later than 2 years	408,000	35,000
Later than 2 years and not later than 5 years	-	-

Approved but not contracted	2014 \$	2013 \$
Not later than one year	34,000	548,000
Later than 1 year and not later than 2 years	34,000	488,000
Later than 2 years and not	102,000	1,224,000
later than 5 years	34,000	-

7. Contingencies

The Company has unconditional guarantees to the other partners in the unincorporated joint ventures (Pastoral Greenhouse Gas Research Consortium, Pastoral Genomics Research Consortium and Johne's Disease Research Consortium) which:

- a. guarantee the due performance and observance of the guaranteed obligations by the unincorporated joint ventures; and
- b. indemnify against any loss or damage due to any breach of the unincorporated joint venture agreements.

8. Subsequent Events

There were no events subsequent to the balance date requiring disclosure in the financial statements.

INDEPENDENT AUDITOR'S REPORT

TO THE READERS OF DEERESEARCH LIMITED'S FINANCIAL STATEMENTS For the year ending 30 June 2014

The Auditor-General is the auditor of DEEResearch Limited (the "Company"). The Auditor-General has appointed me, Trevor Deed, using the staff and resources of Deloitte, to carry out the audit of the financial statements of the Company, on her behalf.

We have audited the financial statements of the Company on pages 1 to 6, which comprise the statement of financial position as at 30 June 2014, the statement of financial performance, statement of movements in accumulated funds and statement of cash flows for the year ended on that date and the notes to the financial statements that include accounting policies and other explanatory information.

Opinion

Financial statements

In our opinion the financial statements of the Company on pages 1 to 6:

- comply with generally accepted accounting practice in New Zealand; and
- give a true and fair view of the Company's:
- financial position as at 30 June 2014; and
- financial performance and cash flows for the year ended on that date.

Other legal requirements

In accordance with the Financial Reporting Act 1993 we report that, in our opinion, proper accounting records have been kept by the Company as far as appears from an examination of those records.

Our audit was completed on 21 November 2014. This is the date at which our opinion is expressed.

The basis of our opinion is explained below. In addition, we outline the responsibilities of the Board of Directors and our responsibilities, and we explain our independence.

Basis of opinion

We carried out our audit in accordance with the Auditor-General's Auditing Standards, which incorporate the International Standards on Auditing (New Zealand). Those standards require that we comply with ethical requirements and plan and carry out our audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

Material misstatements are differences or omissions of amounts and disclosures that, in our judgement, are likely to influence readers' overall understanding of the financial statements. If we had found material misstatements that were not corrected, we would have referred to them in our opinion.

An audit involves carrying out procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on our judgement, including our assessment of risks of material misstatement of the financial statements whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation of the financial statements that fairly reflect the matters to which they relate. We consider internal control in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.

An audit also involves evaluating:

- the appropriateness of accounting policies used and whether they have been consistently applied;
- the reasonableness of the significant accounting estimates and judgements made by the Board of Directors;
- the adequacy of all disclosures in the financial statements; and
- the overall presentation of the financial statements.

We did not examine every transaction, nor do we guarantee complete accuracy of the financial statements. In accordance with the Financial Reporting Act 1993, we report that we have obtained all the information and explanations we have required. We believe we have obtained sufficient and appropriate audit evidence to provide a basis for our audit opinion.

Responsibilities of the Board of Directors

The Board of Directors is responsible for preparing financial statements that:

- comply with generally accepted accounting practice in New Zealand; and
- give a true and fair view of the Company's financial position, financial performance and cash flows.

The Board of Directors is also responsible for such internal control as it determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error. The Board of Directors is also responsible for the publication of the financial statements, whether in printed or electronic form.

The Board of Directors' responsibilities arise from the Financial Reporting Act 1993.

Responsibilities of the Auditor

We are responsible for expressing an independent opinion on the financial statements and reporting that opinion to you based on our audit. Our responsibility arises from section 15 of the Public Audit Act 2001 and the Crown Research Institutes Act 1992.

Independence

When carrying out the audit, we followed the independence requirements of the Auditor-General, which incorporate the independence requirements of the External Reporting Board.

Other than the audit and the provision of taxation advice, we have no relationship with or interests in DEEResearch Limited or any of its subsidiaries.

Trevor Deed Deloitte **On behalf of the Auditor-General** Wellington, New Zealand

This audit report relates to the financial statements of DEEResearch Limited for the year ended 30 June 2014 included on the Company's website. The Company's Board of Directors is responsible for the maintenance and integrity of the Company's website. We have not been engaged to report on the integrity of the Company's website. We accept no responsibility for any changes that may have occurred to the financial statements since they were initially presented on the website. The audit report refers only to the financial statements named above. It does not provide an opinion on any other information which may have been hyperlinked to/from these financial statements. If readers of this report are concerned with the inherent risks arising from electronic data communication they should refer to the published hard copy of the audited financial statements and related audit report dated 21 November 2014 to confirm the information included in the audited financial statements presented on this website. Legislation in New Zealand governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

