Animal health planning: p20

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- Deer industry conference preview
- Sire sale reports
- Final sale at Stanfield’s
- The importance of fitness traits
- Elk/wapiti competition
- DEEResearch Annual Report
Playing to our strengths

It’s been a tough start to the year for venison with schedules falling steeply and sitting in the $6.20 – $6.50 region at the time of writing. When combined with rapidly falling soil moisture in many areas it’s not a great situation. We’re fortunate that great spiker velvet prices will be offsetting some of the schedule disappointment.

In October last year the major venison exporters made some frozen season schedule predictions in the range of $6.70 – $6.80, which they clearly stated were subject to stable currency conditions.

Unfortunately the currency situation has been anything but stable over the past couple of months, as Figure 1 shows. The news has been all bad for the euro – by far our most important trading currency for venison. Economic woes seem to be resurfacing out of Greece and, alongside plans for “quantitative easing” (otherwise known as printing money), have placed a lot of pressure on the euro. In January the New Zealand dollar peaked at nearly 68 euro cents – its strongest-ever rate against the currency.

In early February the euro cross rate has bounced back somewhat, although we’re still substantially above where we were in October. At the about the same time, the New Zealand dollar has weakened relative to the US dollar and this will be welcome news for the velvet and co-products trade and the North American venison trade.

We commend the companies for coming out with price predictions last year, even if the latest euro drama undermined that prediction. Farmers in general value any indication of forward prices and they accept that no-one has a crystal ball. If we criticise the companies too much because a prediction didn’t pan out, they will simply stop making predictions.

The extreme currency volatility over December and January coincided with the time of year when exporters are traditionally negotiating their European frozen venison contracts for the year. It’s an unenviable task to be negotiating prices and then deciding how to cover currency requirements in this environment. But most of the feedback we have is that negotiations have gone reasonably well – the demand is there and the market is in a much better situation than it was this time last year. That would explain why the current schedule is about the same or slightly above where it was this time last year, even though the euro had lost about 10 percent of its value up to January.

The February currency bounce-back has resulted in a small but unusual uptick in the summer schedule. We hope there is more in store, but this will depend to some extent on how exporters dealt with their currency requirements after agreeing major deals in January.

We’re well aware that most farmers are seriously annoyed to find themselves back in this schedule situation for a second year, and that using the “excuse” of currency will be wearing very thin. The sad fact is that the economy of Europe – where most of our venison consumers live – has been in a pretty bad way for several years. This has affected not just consumer demand, but also their single currency. The euro has been on a steady weakening trend since it was introduced and especially since the global financial crisis in 2008, as shown in Figure 2.

Figure 1: New Zealand dollar versus US dollar and euro 1 October 2014 – 4 February 2015

It’s been a tough start to the year for venison with schedules falling steeply and sitting in the $6.20 – $6.50 region at the time of writing. When combined with rapidly falling soil moisture in many areas it’s not a great situation. We’re fortunate that great spiker velvet prices will be offsetting some of the schedule disappointment.
With most venison exported to Europe, the continuing weakness in the eurozone has affected our industry more than any other major New Zealand export industry and highlights the risks of having too many eggs in one basket.

The obvious solution is market diversification – finding new, non-European consumers for our venison – but this is easier said than done.

**Partnership tackles market challenges**

We were absolutely delighted to be able to announce in January that through the Primary Growth Partnership, the Ministry for Primary Industries will partner with the deer industry in our Passion2Profit (P2P) strategy for improving profitability in the deer sector. About half of the P2P programme relates to marketing and the focus is new market development and diversification.

New Zealand venison exports to non-euro markets have grown steadily over the past few years as our marketing companies seek out new, higher-paying customers in alternative markets. Figure 3 shows the trend.

P2P includes projects to investigate new markets – particularly China – and also non-seasonal cuisine for venison in traditional markets. All the major venison exporters have agreed to work together on investigating new markets for development potential.

We are confident that this collaboration between DINZ and exporters, with government involvement through the Primary Growth Partnership, will accelerate the diversification of our venison markets – spreading our eggs across a range of baskets.

The potential benefits of P2P are substantial. We have calculated that the market development work, alongside on-farm opportunities, have the potential to put the equivalent of another $2.00 per kilo in deer farmers’ pockets. It won’t happen overnight, and it won’t happen without farmers and venison marketers working hard and grabbing the opportunities as they arise, but we believe this is a great first step in returning our industry to a situation of profitability, confidence and growth.

Andy Macfarlane, Chair, Deer Industry New Zealand and Dan Coup, Chief Executive, Deer Industry New Zealand

**Passion2Profit achieves Primary Growth Partnership status**

DINZ and the Ministry for Primary Industries are to partner in a Primary Growth Partnership programme, Passion2Profit (P2P). This is the deer industry’s strategy to boost its profitability and arrest the fall in farmed deer numbers that has occurred through change in land use toward higher-profit enterprises. The programme has two major projects: developing new, premium markets and exploiting technology to boost on-farm profit.

The programme will invest about $16m over seven years, with about half from industry and half from the Primary Growth Partnership fund.

DINZ Chairman Andy Macfarlane explained that, in the first instance, DINZ reserves would be drawn down to fund the programme, but that an increase in levies may be required at some point.

*Deer Industry News* will describe elements of P2P over coming issues, but for a summary of the programme, see [www.deernz.org/dinz-activity](http://www.deernz.org/dinz-activity)

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*Make the most out of your deer this season with a health plan and expert support from the Johne’s Consultant Network.*

Contact JML for details

**0800 456 453**
The Hawke’s Bay Branch NZDFA, Executive Committee and Deer Industry New Zealand warmly invite you to attend this historic 40th Annual New Zealand Deer Industry Conference. The event returns to the outstanding Napier War Memorial Conference Centre, Marine Parade, Napier on Tuesday 26 May and Wednesday 27 May 2015. The branch-hosted field day will be held from 8.30 am–2.30pm on Thursday 28 May at the large Tikokino operation, Temco Agriculture, hosted by George Williams and Laura Billings.

The hosts are keen to build on the success of last year’s event, which saw an increase in numbers of active deer farmers and families attending both the conference and the field day. While acknowledging the rapid and amazing journey of the 40 years since the DFA was founded, the conference will also be focusing firmly on the industry’s present and future.

The field day will complement the formal conference activities, which highlight keynote speakers and aim at encouraging free and wide-ranging discussion. A feature this year will be the profitability improvement and company marketing initiatives based around Passion2Profit, which is now being supported as part of a Primary Growth Partnership programme (see editorial on page 2).

The branches and the DFA/DINZ new faces programme are also working hard to attract the next generation of young deer farmers who have made recent conferences so stimulating. Associated with the ongoing central themes around Hindsight to Foresight 40 years on, the programme (to be finalised later this month) will include:

- overview of the New Zealand rural economy
- venison marketing development with the Primary Growth Partnership and Passion2Profit
- Advance Parties and Passion2Profit
- leading women in agribusiness and farming
- building on a successful velvet antler season
- keynotes addresses – speakers to be confirmed
- deer industry environmental awards 2014/2015 with keynote speaker.

Individual session or day registrations are also available. Delegates are invited to bring partners, farm staff or friends interested in the deer industry to the evening social events and to enjoy the attractions and down-to-earth approach of this conference in its superb Napier waterfront setting.

Programme outline:

As always, our invited keynote speakers (still being finalised) will have strong credentials and presentation skills. They are a little outside the range of typical industry representatives and continue the recent line-up of outstanding New Zealanders with a rich diversity of experience and views. As details are confirmed, these will be posted on the conference website (www.dcms.co.nz and www.deernz.org), in Stagline-Online and April’s Deer Industry News.

Building on last year’s initiative, conference sessions will be live streamed, with potential for viewers to engage in discussion via text, Twitter or email. This opens up conference participation to deer farmers who can’t make the event in person (see side bar for further details).

Sponsorship

We have circulated a new sponsorship prospectus for this event based on the formula that seeks to increase company profile and involvement in the event. Sponsors are responding enthusiastically, with support already approaching the record interest of 2014. These companies are a huge part of the event and bring colour, delegates and commitment, allowing a realistic registration fee and adding value to your own deer farming businesses from your participation.

NZDFA Annual General Meeting and DINZ sessions

The NZDFA’s 40th AGM will open the conference with a session on Tuesday 26 May from 11.00am – 1.00pm. Industry issues will be debated on the conference floor at the NZDFA AGM and generous time is available during the DINZ and agribusiness sessions, following each set of presentations and then again at the conclusion with a Board Q&A session.

The emphasis is on an informative, inexpensive and effective conference that allows healthy debate, interaction with industry leaders and a balance of good, innovative social events and entertainment.

The mix-and-mingle style welcome function will lead off on the Tuesday evening with themed venison dishes from
across the past four decades and one on into the future, featuring culinary advances in the presentation of farmraised venison. This seated event will include historical reflection and participation from conference goers with a few twists complemented by outstanding regional wines, craft beers and non-alcoholic alternatives. Wednesday’s awards dinner will be more traditional and formal in parts, but still allows celebration and features the prized Deer Industry Award and after-dinner entertainment.

Accommodation
Accommodation options have been reserved at nearby hotels in the Marine Parade area (Te Pania, the Nautilis and the Quality Inn plus the nearby Quest serviced apartments). These options can be seen on the registration form. This year as usual, acting and registering early is important, as is booking flights. (Being a provincial destination, flight options can be limited.) Requirements for accommodation must be coordinated through the conference organiser by completing the registration form. Full details will be available with the electronic registration form in early March.

Registration
Experienced conference organiser, Pat Johnston of Dunedin-based Destination Conference Management Services (DCMS) is again leading the conference planning and aims to assist the committee and DFA to attract locals as well as those who haven’t been to a conference for years. Conference registration is accessed online through the website. This allows delegates to complete their registration and accommodation booking for themselves, partners and any other staff. The full programme will be available online at www.deernz.org and circulated to NZDFA members through Stagline-Online from March. If you are having problems or can’t access the online registration, just call Pat or Eliza and they will complete your registration over the phone and send you confirmation by email or post.

Contacts
DCMS, Pat Johnston: 03 477 1377, 0274 983 408, pat@dcms.co.nz
Producer Manager, Tony Pearse: 021 719 038, 04 471 6118, tony.pearse@deernz.org
Producer Coordinator, Amy Wills, 04 471 6110, amy.wills@deernz.org

Deer conference live on the web
This year’s deer industry conference will be broadcast live on the internet, with viewers able to ask questions of speakers, using a comment thread, email or tweet. The conference is the industry’s 40th and the second to be live streamed on internet-based Rural TV. Keynote speakers at last year’s conference attracted an online audience of 1000-plus, five times the number of attendees at the main conference sessions.

“We expect viewer numbers will be up again this year. More farmers and others involved in the industry have heard about the service and are now comfortable watching events on-line,” says DINZ Chief Executive, Dan Coup.

“It enables us to communicate with our stakeholders live, without any filters, wherever they are in the world. They in turn can see and hear the speakers respond to questions and comments.”

Interviews with sponsors during breaks in the conference programme also add value for the firms that play an important part in funding such events.

Dan Coup says the programme will have a big focus on Passion2Profit (P2P), a joint venture between DINZ and the Ministry for Primary Industries under the Primary Growth Partnership. P2P has two strands – developing new year-round premium markets for venison and addressing barriers to productivity on the farm.

“Deer farming has a celebrated past and an exciting future. With P2P both exporters and farmers have big parts to play in making the venison industry profitable and sustainable for everyone involved. The conference is an ideal forum for making it clear to everyone where the opportunities lie and how they can tap into them. Rural TV gives us a wonderful opportunity to communicate with large numbers of our stakeholders in a way that hasn’t been possible in the past.”

Sarah Perriam, co-founder and Chief Executive of Rural TV, the country’s rural digital media channel, says the conference coverage will be hosted on www.ruraltv.co.nz

“Deer farmers are known as pioneering people and it’s great to have them working with us again as we further develop our offerings for rural viewers. Rural broadband services have now improved to the point where live streamed video is easy for most rural people to watch.”

She says it’s always interesting to watch social media activity during conferences.

“A growing number of people at farming conferences are spreading the word through Twitter and other channels. Last year we had agriculture students and food industry professionals in Asia watching the deer conference live stream and commenting, as were young farmers sitting in the conference room.

“Live-streaming and social media work together, breathing life into learning and communication between market participants,” says Ms Perriam.

The conference has an official Twitter account @DeerNZ15 and hashtag #dinznzconf15 for people to follow the updates. All the live streamed video content will be posted on the DINZ YouTube channel within a week after the conference, where it will be able to be viewed and downloaded.

Highden Deer Park
Pleasant Point
Semen for sale from Sovereign II and Kallis
Both stags have one broken coronet so can’t grow full heads but getting amazing sons from each – up to 41 points from 2yo sons, scoring over 400 inches.
Hinds also available.
Contact: Chris and Debra Petersen
Ph 03 614 8373 or chrispetersen@farmside.co.nz

Issue 70 • February/March 2015
AGM constitutional matters: NZDFA and DINZ nominations: 2015/16 year

A) Executive Committee nominations

CALL for nominations for NZDFA positions

Members of the NZDFA Executive Committee are elected for a two-year term. Members retire by rotation.

Nominations are now called for the following positions:

- Executive Committee member, South Island, one vacancy. (Current member, Kris Orange retires by rotation)
- Executive Committee member, Member At Large, 1 vacancy. (Current member, David Morgan retires by rotation)

Nominations are invited for both positions. A nominee need not be resident in the Island of nomination but the following conditions are required:

These two Executive Committee vacancies are open to wider nomination from all NZDFA members.

For the Island based Executive Committee position each nomination must:

- be in writing and specify the Island that the nominee seeks to represent
- be moved and seconded by two other full, life or elected members of the Association resident in the same Island as the vacancy
- be signed by the nominee
- be delivered to the Association's office by 5.00pm on Tuesday, 31 March 2015.

Note. The nominee must be a current financial member of the Association.

For the Executive Committee Member at Large positions each nomination must:

- be in writing
- be moved and seconded by two other full, life or elected members of the Association
- be signed by the nominee
- be delivered to the Association's office by 5.00pm on Tuesday, 31 March 2015.

Note. The nominee must be a current financial member of the Association.

All nominees are entitled to submit a statement of about 150 words in support of their election. This statement must be sent to members at the same time as the ballot papers.

Should an election be necessary, details of postal voting and procedures, candidate profiles and confirmation of timelines will be sent with the April 2015 edition of Deer Industry News or by separate post to meet deadlines. Postal voting runs for 21 days and must close 7 clear days prior to the AGM on Tuesday 26 May 2015 (i.e. voting opens on Tuesday 28 April 2015 closing on Monday 18 May 2015).

B) Selection and Appointment Panel (SAP)

The role of the SAP is to make producer representative appointments to the Deer Industry New Zealand Board and to meet with those appointees at least twice a year to discuss industry matters and their roles as Deer Industry New Zealand representatives.

The 8-member SAP is made up from:

- Four elected non-Executive Committee members: a farmer member from each of the North and South Islands and two elected Members At Large
- The elected non-Executive Committee members whose term expires at the forthcoming AGM are (NI) Donald Whyte, Mid Canterbury. (retirement by rotation) and David Stevens, Southland (retired, October 2014).

Nominations are now called for the following positions:

- SAP member, North Island, one vacancy.
- SAP member, Member at Large, one vacancy.

Each nomination must be in writing and moved and seconded by two full, life or elected members, signed by the nominee and delivered to the Association offices by 5.00pm on Tuesday 31 March 2015.

The nominees must be full, life or elected members of the NZDFA. Further, nominees:

- may not be a member of the Deer Industry Association,
- can not hold more than a 20% interest in any organisation that is a member of the Deer Industry Association,
- can not be a candidate for membership of the Deer Industry New Zealand Board, or a current member of the Deer Industry New Zealand Board.

[The voting procedure and timing of the process is the same as that for the positions on the Executive Committee.]

C) NZDFA Appointment to Deer Industry New Zealand Board

The Ministerial approval of the Regulations to allow a 50:50 levy share from producers and the processor/exporting sector was formalised in October 2004 in the Deer Industry New Zealand Regulations 2004.

The Deer Industry New Zealand Board comprises four producer-appointed representatives and four representatives appointed by the processing/exporting sector. The producer representatives are selected by the New Zealand Deer Farmers’ Association through an Electoral College process, and have been appointed for a three-year term on recommendation by the NZDFAs Selection and Appointment Panel according to its detailed Operating Code of Practice and then advised to the Minister. Successful appointments who retire by rotation are eligible for further terms.

Nominations are now called for the following NZDFA-appointed position on the DINZ Board:

- 1 vacancy; Deer Industry New Zealand Board members retiring by rotation, Jerry Bell, Otago

The nomination must be moved and seconded by full, life or elected members, signed by the nominee and delivered to the Association’s offices before 5.00pm on Tuesday 31 March 2015.

The NZDFA Constitution (2008) refers:

37.9 Nominations for DINZ: The Returning Officer shall publicly announce, in writing, the names of the retiring Association representatives of DINZ and call for nominations for their replacement, prior to the end of March each year. Nominations shall be:
(a) made by any two Full Members, Elected Members or Life members of the NZDFA
(b) in writing, and
(c) in the hands of the Returning Officer at a date to be specified which will be before the Annual General Meeting of the Association each year.

37.10 Eligibility for Selection as DINZ Representative: All persons interested...
or engaged in the deer farming industry shall be eligible for nomination, with the exception of employees of DINZ or of the Association. Each nominee for selection shall be required to make a written declaration of any office held or managerial position or financial interest that either the nominee or any of the nominee’s immediate family or any partner or fellow shareholder in any deer farming project has in any organization which deals directly in the products of or materials for the deer farming industry.

37.11 Right to Address AGM: Each nominee for selection as a DINZ representative may address the Annual General Meeting of the Association at a time and date to be specified by the Executive Committee.

37.12 Selection Process: As soon as possible after the closing date for nominations the Returning Officer shall publish to all Branches and in Deer Industry News a full list of the persons nominated, together with any declarations of interests received from them. On the date determined for the selection (but not later than the end of June each year), the Selection and Appointment Panel shall converse, interview and select from the nominees as many Association representatives as are required to fill available vacancies on DINZ.

Nominations for the positions will be considered by the Selection and Appointment Panel following the 2015 AGM within 21 days of that meeting, with recommendations and appointment to the Board being advised to the Minister for Primary Industries at that time subject to the Operating Code of Practice procedures.

Nomination forms

Nomination forms for the Executive Committee, SAP and Deer Industry New Zealand vacancies can be obtained from the Association’s office: Phone: 04 473 4500; Fax: 04 472 5549; email: tony.pearse@deernz.org

Nomination forms are also available through your local Branch Chairman, Secretary or the Producer Manager and will be posted on the website: www.deernz.org at time of publication of Deer Industry News, Issue 70, February, 2015.

For further information please contact the Returning Officer, Tony Pearse at the Deer Industry New Zealand office or 021 719 038 or tony.pearse@deernz.org

2015 Photographic competition

Following the ongoing success of the large number of high quality entries last year the annual deer industry photographic competition will again be a feature of the 2015 annual conference. While details, sponsorship and prizes are being finalised, the competition will be judged through the Deer Industry News editorial group with prizes presented at the conference and include both a Judges’ and People’s Choice award.

Rules and entry form will be available from publication of the April issue of Deer Industry News, on request from the office and via the DINZ website.

Photos must be of subjects that are suitable for wider publication, taking into account the public’s perception of the deer industry. The judges retain the right to disqualify any photo they deem to be unsuitable in this regard.

Judging criteria

- technical aspects (focus, composition, balance, etc).
- conveying core values including best practice for animal welfare, environmental stewardship and animal husbandry
- ability to show the industry in a positive light
- that special “wow” factor that makes a shot stand out.

Eligibility to enter

The competition is open to all participants in the deer industry – farmers, farm employees or those employed in a subsidiary industry (transport, vets, research, seed etc).

Preferred subject material

- Deer in the field: This shows farmed deer in their “natural” setting – in crop or pasture or tussock hill country for example. It could be individual animals or groups; stags, hinds, fawns, weaners).
- People working with deer: Positive images of animal husbandry work, e.g., shifting animals, drafting, tagging, Tb testing, vaccinating etc.
- Our deer farming environment: An opportunity to show off the environmental enhancement that goes hand in hand with best practice. In these photos the farm environment is the star. The deer are present but play a bit part. Shots will be aesthetically pleasing but also have a practical side, e.g. retired areas, protected waterways, nicely landscaped and fenced areas, good shelter plantings, well constructed deer sheds with runoff taken care of and so on.

Format of entries

Photos will need to be submitted as 8” x 10” prints for mounting and display. Either landscape (wide) or portrait (tall) format are acceptable. The electronic file used to make the print must also be submitted.

Make sure your digital camera is set to take pictures in high resolution format. The electronic file, which should be a minimum of about 2600 x 3875 pixels. It should be a jpeg file of about 2.5Mb to meet these criteria but .tif file format is also acceptable. The digital file must be in its original state and not altered in any way.

For further information contact:

- Producer Coordinator, Amy Wills 04 471 6110, amy.wills@deernz.org
- Producer Manager, Tony Pearse, 021 719 038, tony.pearse@deernz.org
- Deer Industry News, Editor Phil Stewart, 04 384 4688, phil@wordpict.co.nz

Issue 70 • February/March 2015
Innovation at Clayton Station: Part two

In the December 2014 Deer Industry News, Tony Pearse reviewed the progress that was being made at Clayton Station, where the three-year Deer Industry Focus Farm programme has wrapped up. In Part two of our coverage, Tony outlines the SWOT analysis done for the station (Table 1). He also looks at innovation in three important areas: environmental management, a low-cost self-feed silage system and the $14-per-head benefits of using grain in late lactation.

Table 1: Clayton Station SWOT analysis and progress

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>OPPORTUNITIES (responses/comments)</th>
<th>WEAKNESSES (responses/comments)</th>
<th>THREATS (responses/comments)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Moderate rainfall</td>
<td>• More deer (have increased numbers but reluctant to extend further at present)</td>
<td>• Long cold winter; snow prone (remains vulnerable; significant early snow (2m on hill)) in June 2013 affected yearlings and subsequent growth and conception; slow recovery in body condition scores (BCS)</td>
<td>• Swings in version/lamb/beef schedule (felt in 2013/14 with lamb prices)</td>
</tr>
<tr>
<td>• Good balance of flats/hill and good natural cover (tussocks etc)</td>
<td>• Bring in more sunny country to winter hinds (positive experience with initial development of self-feeding silage pad suggests further opportunities to use system in more challenging topography; advantages in warmer aspects and reduced long-term snow risk)</td>
<td>• High altitude and short growing season.</td>
<td>• Snow (unpredictable, still an issue)</td>
</tr>
<tr>
<td>• Good infrastructure</td>
<td>• Feeding and breeding to increase weaner weights (slight improvement only but imported new genetics will continue to improve opportunities for gain; grain supplementation in later lactation using Advantage Feeder looks promising and cost effective)</td>
<td>• Intensive mustering of hinds pre-weaning limiting weaner growth (grain supplementation in late lactation helps allay this)</td>
<td>• Disease risk (especially Tb and Johne’s disease) (being monitored; part of advisory programme and animal health planning)</td>
</tr>
<tr>
<td>• Scale and scope and long history of property</td>
<td>• Flexible stock class to utilise surplus (cattle grazing and cows; system needs flexibility and good timing for decision making)</td>
<td>• Different income streams (seasonal timing) (achieved)</td>
<td>• Disease risk (especially Tb and Johne’s disease) (being monitored; part of advisory programme and animal health planning)</td>
</tr>
<tr>
<td>• Strong heritage of Orbell family</td>
<td>• Feed pads for cattle and deer (work in progress)</td>
<td>• Different income streams (seasonal timing) (achieved)</td>
<td>• Swings in version/lamb/beef schedule (felt in 2013/14 with lamb prices)</td>
</tr>
<tr>
<td>• Excellent young staff and management</td>
<td>• Cash crop versus summer brassica (no cash crop in deer farm)</td>
<td>• Subdivision opportunities on hill subject to water (not justified – “KISS” principles apply)</td>
<td>• Snow (unpredictable, still an issue)</td>
</tr>
<tr>
<td>• Stock integration, mix of livestock</td>
<td>• Finish own weaners (done reluctantly in 2014, yielding gross margin of $182/ha, or 28c/kgDM in a relatively kind season; in a tough season in snow-prone country finishing costs would be substantially higher)</td>
<td>• Improve genetics (ongoing, but effective start with new quality genetics in female lines)</td>
<td>• Disease risk (especially Tb and Johne’s disease) (being monitored; part of advisory programme and animal health planning)</td>
</tr>
<tr>
<td>• Proximity to local services</td>
<td>• Keeping fawns closer on specialist feed pre-weaning to lift weaning weight (grain supplementation and moved some hinds into front country)</td>
<td>• Environmental development (significant programme started – see below)</td>
<td>• Swings in version/lamb/beef schedule (felt in 2013/14 with lamb prices)</td>
</tr>
<tr>
<td>• Link with Downlands Deer including wearer marketing programme and agreed shared venison returns above established expectation.</td>
<td>• EID to concentrate on identification of good genetics (work in progress)</td>
<td>• Poor winter crop yields, crop failure and bogging damage post crop (self feed silage pit system established and being refined; better ability to utilise whole crop silage and to build up winter feed reserves)</td>
<td>• Snow (unpredictable, still an issue)</td>
</tr>
</tbody>
</table>

Environment and water quality monitoring

Established willows are being removed to allow filtration replanting and aid water flow.

Clayton has been monitoring water quality (E. coli, nitrogen, phosphate and sediment) coming into the property, entering the deer farm and exiting the deer farm. Four tests show that nitrogen, phosphate were relatively low all the way through the property with no influence from the deer farm. E. coli levels increased before entering the deer farm and then stayed static. Sediment slightly increased in the deer farm.

Further tests are now being done to pinpoint where the E. coli levels are increasing. The filtration area being developed at the bottom of the deer farm (where all the creeks converge before leaving Clayton) should greatly assist with sediment as well as fencing off the majority of creeks in the deer farm.

Hamish Orbell and staff have completed a major fencing programme through the wetlands and removed many well-established willow trees to aid water flow and to allow filtration replanting. A final re-spray of the willows will be undertaken before planting.
This development goes hand in hand with establishing self-feeding silage pits on suitable dry areas to keep stock of low-lying heavy soils in winter. The successful innovation on previous waste ground of river gravels and broom helps save the flats from pugging (see side bar). Other sites on warmer ground without much pasture potential and low risk of snow are being assessed.

**Innovation in self-fed silage**

Hamish was frustrated by the difficulty of getting whole-crop silage rolled well and also by its inefficient utilisation. Concrete bunkers for silage were an expensive alternative, so he has thought “inside the box” to find a solution. For just $2,500 per 12-metre unit he acquired some large second-hand containers relocated from Christchurch. They were painted with corrosion proof material and secured firmly to a rocky dry area in a 60-hectare area of broom-infested river bed, repurposed as a self-feed silage pits. Six hundred hinds can access the feed stack from both ends at a feeding face that allows about 5 percent of the mob to be feeding at any one time.

A key to success was the ability to better roll and compact whole crop or surplus grasses against the container walls. This area is not far from a significant stream, which is monitored for signs of leaching risk (no issues found); the small amount of leachate that does come from the pit is managed and contained. It took very little labour to manage regular shifting of the feed stack from both ends at a feeding face that allows about 5 percent of the mob to be feeding at any one time.

Field day visitors were impressed and suggested there was scope to extend feeding periods to 120 days. Having large areas of broom for shelter and some eating diversion while spelling heavy winter soils and pastures reduces damage and overwintering costs. Hamish believes the system is so flexible and low cost it could be shifted around the farm without too much difficulty. Alternatively, a series of feed pads could be developed in other key locations, which are currently being assessed in terms of snow risk and feeding priority. Growing crops and grasses for the system will include assessing triticale and grasses. A simple broadcast and drilling system has evolved based around rye-corn and annual ryegrasses, all of which could play a role in preserving quality silage for an expanded system.

**Why feed grain to lactating hinds?**

Supplementing hind and fawn feeding during lactation in the high country is a changing option, but Clayton Station reports success with making barley available on demand using Advantage Feeders self-feeding grain bins. These were introduced to a couple of hind–fawn mobs in relatively accessible front fawning country.

For Clayton this addresses a feed quality issue on the hill in January and February during the critical second half of lactation. There is only limited room to bring all the hinds down on to the flats before weaning, although increased fertility and oversowing will help alleviate this over time.

Historically, feeding grain has not been practical because of the wide dispersal of hinds and fawns, constant disruption and time involved. The Advantage Feeders allow a relatively large quantity of grain to be offered to hinds but restricts daily pe-head allowance. In addition, the ration could introduce trace elements or palm kernel extract. About 15kg per head was fed with a weekly fill, in a system that Hamish believes could be considerably improved in 2015.

The advantage in the first year wasn’t so much the increased fawn weight – the real bonus was the two-week gain in conception date and the maintenance of body weight and condition score in the hinds fed grain (Table 2). There were also economic advantages (Table 3).

Clayton Station will continue to monitor actual gains from hinds fed grain last year and is repeating the trial this year.

continued on page 10
**Table 2: Hind and fawn performance with and without grain feeding during late lactation**

<table>
<thead>
<tr>
<th>Tagging (before grain)</th>
<th>Weaning</th>
<th>Stag removed</th>
<th>Scanning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hinds (kg liveweight)</td>
<td>Fawns (kg liveweight)</td>
<td>Hinds (kg liveweight)</td>
</tr>
<tr>
<td>MA hinds: no grain</td>
<td>110</td>
<td>45</td>
<td>95 (-15kg)</td>
</tr>
<tr>
<td>MA hinds: grain</td>
<td>104</td>
<td>43</td>
<td>102 (-1.2kg)</td>
</tr>
</tbody>
</table>

**Notes to Table 2:**
- Two mobs hinds on front country on similar feed, hill aspect and so on. One mob fed about 250g/day/ hind + fawn unit for 30 days Feb = 7.5kg grain
- Hinds did take some time to eat grain but there was no noticeable difference in grazing habit in the grain mob.

**Table 3: Economic benefits of grain feeding**

<table>
<thead>
<tr>
<th>Income: Weaner liveweight</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>MA hinds: no grain</td>
<td>$1.0/kg liveweight</td>
</tr>
<tr>
<td>MA Hinds: grain</td>
<td>$2.0/kg liveweight</td>
</tr>
<tr>
<td>Difference</td>
<td>+1kg liveweight @ $3.50/kg liveweight = $3.0/hd</td>
</tr>
<tr>
<td>Early conception</td>
<td>+2 weeks @ 400g/day = 5kg liveweight @ $3.5/kg = $17.5/hd</td>
</tr>
<tr>
<td>Adv. Feeder</td>
<td>Advantage Feeder 25% of use for $3,200/10 years/100 hinds x $0.80/hd</td>
</tr>
<tr>
<td>Total</td>
<td>$20/fawn @ 90% = $18/hd</td>
</tr>
<tr>
<td>Net gain</td>
<td>~$14.20/hd</td>
</tr>
</tbody>
</table>

**Note to Table 3:** Improved lifetime performance of heavier replacement weaners could be a further benefit, in addition to the economic benefit above.

**Parasites workshop**

Internal parasites have been targeted as one of the eight key animal health issues in the “Clean Bill of Health” awareness campaign launched this month by DINZ.

The country’s leading experts in this field gathered at AgResearch Invermay on 24 November last year for a parasitology summit, arranged through DEEResearch. The group comprised Bill Pomroy (Massey University), Dave Lawrence (independent veterinarian), Dave Leathwick (AgResearch), Collin Mackintosh (AgResearch), Geoff Asher (AgResearch), Richard Shaw (AgResearch), Jamie Ward (AgResearch), Ian Page (New Zealand Veterinary Association Deer Branch), Tony Pearse (DINZ), Lindsay Fung (DINZ), Catharine Sayer (DINZ), Victoria Chapman (Veterinary Operations Manager, Zoetis), Justin Hurst (Merial) and Noel Beatson (DEEResearch and chair).

DINZ Science and Policy Manager, Catharine Sayer, says the DEEResearch Board is acutely aware of the frustrations faced by deer farmers who are trying to sustainably manage internal parasites in their deer herds.

“There is a shortage of products registered for use in deer and this can create constraints around withholding periods. In addition, single active products that have worked in the past are no longer effective and there hasn’t been consistent advice about the best strategy for parasite control.”

She says DEEResearch sees internal parasite control as a top priority and was pleased to see the experts who were at the summit in broad agreement about a plan of action for research to address some of these problems. In particular, the attendees recommended DEEResearch support for some urgent “quick-fix” work to identify withholding periods for effective combinations of anthelmintics when prescribed by veterinarians as well as longer-term research to develop effective deer-specific single-product anthelmintics.

**Early weaning at Haldon**

Paddy Boyd (Haldon Station) reported a similar experience from the members of the Mackenzie Basin Advance Party in 2014. As dry conditions in later lactation really started to bite, hind BCS was dropping dramatically. A decision was made to wean in mid February and concentrate on quality feeding hinds and weaners as distinct groups. Without lactation pressure, hinds recovered 1.0–1.5 BCS units in less than three weeks, from 2.0 to 3.5 for the hardest hit group, and 2.5 to 4.0 for others. Lifting planes of nutrition ensured both a high conception rate and a greater concentration in the first cycle. The supplementation was based around lucerne baleage and was considered highly cost effective across big numbers of hinds. For many in the Advance Party, hands-on body condition scoring and using the power of that information to make smart, informed decisions was a new step in hind management. It marks a concentration on the end game, based around successful conception and the preferential management of hinds and weaners.
The exotic world of maral deer: Part two

DINZ Producer Manager, Tony Pearse, attended the World Deer Breeders’ Congress in Russia last August. In his initial report (Deer Industry News December 2014) he discussed the development of the modern deer industry in the Altai region. In Part two of his report, Tony looks at nutrition and animal health of the marals in central Asia’s challenging environment. He also covers at the research being done into antler and some of the novel products and treatments being developed for the domestic market.

Nutrition and animal health

Overwintering in Altai conditions (up to seven months and 2–3m of snow and temperatures as low as −50°C) is a major challenge. New feeding systems are being developed to cope with these tough conditions. Research initiatives are being undertaken around feed additives and feed types to improve nutrient digestibility and seasonal performance, particularly in antler growth. Feedstuffs include addition of zeolites (naturally occurring minerals with properties as catalysts) beet pulp, dry distillery dress cake, liquid polysaccharides and so on. This is measured by earlier button drop, quick post-rut body weight recovery and, as a bonus, a 20 percent reduction in typical rough forage costs. Mountain pastures contain a good balance of clovers and coarse native grasses, where maral run free in the large low-stocked park situations (0.5–1 deer/ha).

Oats, peas and sunflower mixtures are being grown for wrapped baleage and silage storage with grain and energy boosting rations added as temperatures change.

Animal health constraints to industry development include parasites, infectious diseases and conditions affecting antlers. Rapid expansion with little attention to quarantine or veterinary planning led to spread of Tb, pasteurellosis, brucellosis and associated high helminth parasitic challenge, confounded by the absence of scientifically based preventative and therapeutic treatments. Yields decreased by 15–30 percent with high death rates.

Following investment in research and encouraging formal animal health programmes, most of these diseases are now either controlled or eliminated. However the growth in the number of antler deer and increase in stocking rates continues to provide a parasite challenge.

Antlers and products: Recent advances

Under the current R&D programme, research has been targeted at advanced analgesia and administration and removal technology, primarily designed to mitigate a high injury risk (animals and people) and improve the efficiency and welfare of what is a very primitive system. Improvements include:

- restraints via hydraulics in drop floor crushes
- use of relaxants and neuroleptics before removal
- new reciprocating saw equipment
- anaesthesia through a hypothermia contact-freeze method and specialised cutting tools
- haemostat medication.

These are claimed to increase labour efficiency dramatically while reducing costs and reducing healing times.

Once harvested, the antlers are not frozen but processed typically using combined immersion techniques: 18-fold immersion in cooking water at 96–98°C over three days, and at least six direct heat dryings, before then air drying on racks in purpose-built velvet houses for a total time of 30–45 days before the stable conditions of processed velvet is reached. This process remains dependent on the skill of the individual processor.

Several new techniques (some patented) designed to preserve maximum biological activity have been developed including better sorting of antlers according to six weight and beam diameter categories and adjusting boiling time to suit, allowing an improvement in product quality and value, with group boiling reducing costs.

Vacuum freeze drying is used (50°C at 0.7–0.9 atmospheres) over two-to-three days to bring humidity to 15 percent following three days of boiling treatments and also combined with infrared antler drying) to reduce the processing time. It is claimed that the biologically active substances are significantly enhanced.

The industry now directs the poor-styled antlers (poor structure, damage, asymmetry, malformation and highly calcified smaller antler) into the bio-substance domestic market. New techniques using a chemical toxicologically safe method of de-hairing no longer require de-skimming (velvet skin contains high levels of fat, proteins and vitamins). On completion, the antlers are ground and the powder then mixed with an equal volume of whole blood and vacuum dried.

New techniques are also being developed to cope with the mineralisation that creates insolubility problems for substances with high biochemical and bioactive characters. These allow 16 percent additional recovery of concentrate from fresh antlers and 41 percent from processed antlers with 98 percent solubility, far superior to alcohol and aqueous extractions. In addition, concentrations of amino acids extracted from processed antler acids can be vastly increased through use in a “pantoliser”.

Researchers claim that maral antler concentrates have more amino acids, collagen, vitamins, minerals, testosterone and growth-promoting factors than reindeer.
Maral venison and co-products

There has been a long-held aversion to maral venison, partly because supply has concentrated on culled animals and partly through a perception of dark, firm, dry product. Venison was always sold at discounted prices. Recent research has demonstrated that maral meat surpasses antlers from the point of view of its biochemical composition. Work in this area has developed patented techniques in maral venison preservation utilising minced product and drying via infrared and vacuum freeze drying.

Additional work has been done on recovering bone protein extract, via autoclaving venison and bone together, allowing a high 90 percent plus conversion to bioactives. Of the 200 tonnes slaughtered, only up to 7.0 tonnes are used in the manufacture of functional nutrition products. Maral by-products traditionally in demand in southeast Asia are not used or exported because reliable modern preservation and processing methods are not widely known. Trial work in vacuum and infrared drying has been undertaken and patented on product with an “ultrafine powder structure”. Antler too has been manufactured down this route suggesting high potential for use of antler in functional foods and cosmetic products.

Balneotherapy

Much of the Russian research presented at the congress, and a key part of the post-congress tour of Kazakhstan and Russia, featured the role of antler and related products used as infusions in health spas, using heat, via dry and wet saunas, blood and velvet hot baths, steam treatments and, for the enthusiast, rectal or vaginal enemas. The Kazakhstan tour participants were all offered the opportunity to participate in these treatments (well not quite all!) at a newly established spa. They certainly experienced a variety of reactions as they were heated, super chilled, massaged, steamed, bathed and offered an extraordinary array of velvet alcohol and aqueous extracts mixed with local herbs, honeys and various maral extracts over a three-hour session under supervision from the clinic’s medical staff. It was an unforgettable and generous experience and created a relaxed atmosphere within the congress tour group, as it was no place for shyness or reluctance to try something new.

A key aspect of balneotherapy is the recovery and use of the boiling waters used in the preservation antlers after harvest, as it is considered to have valuable biological properties. The product is highly perishable and requires special storage conditions in its boiling state, which is energy expensive. New methods of storage involving medicinal herbs and pressure autoclaving are being developed.

Other areas of work aimed at enhancing industry profitability include:

- production of waste-free soluble concentrates
- liquid and solid media for growing microorganisms
- feed additives for dogs based on antler cake left over from pantocrine extraction
- production of bio-substances based of fibrin, following maral blood defibrination.

To date, the partnership between maral farms and processing companies has increased maral farm profitability by 17–24 percent. The industry did not have veterinary and sanitary standards for stocking, preservation or manufactured products but that has now been rectified.

The research programme has so far confirmed 61 new patents, and has been well published in science and associated trade journals. Some 38 new regulatory and technical documents have been used for industry regulation, as guidelines for maral breeding, for authorities and as teaching resources in higher agricultural institutions. These developments are claimed not only to have saved the industry, but also to be stimulating its development and place in the Altai culture and economy. Maral has turned from “a barely known animal into the golden brand of the Altai region and the Altai republic, which now benefits the region with an inflow of domestic and foreign tourists”.

The 2014 World Deer Farming Congress VI, funded by the Kazakhstan Government and hosted by the Altai republic and region, was also a key part of this innovation.

Reference

*The Living Gold of Altai* (World Deer Congress VI Information Booklet) 29 August 2014.

Editors: Lukyanov, AN and VG Lunitsyn.
Sire sale report

by Phil Stewart, Deer Industry News Editor

Last season Eddie Brock bought a share in the top-priced stag. This year Brock Deer was the vendor for the country’s most expensive stag, a $50,000 two-year-old son of Axel that cut a healthy 10.2kg four days after he was sold (see photo). Netherdale also had a good sale, with the top stag, a three-year-old, under the hammer for $40,000.

Littledale did well too, selling all of its offering of nine stags, with the top one going for $41,000. The season also marked the 30th and final sire sale for Stanfield’s (see separate article on page 15), which turned in a typically solid result.

Of the sales we are aware of, the overall offering of 832 stags and bulls was down 9 percent on last year, a sign of the continuing correction within the industry as supply of sires reduces to meet demand. On the plus side, the clearance rate wasn’t bad. Overall it was 81.6 percent, slightly up on last year.

As previously, elk/wapiti sales (85.8 percent clearance) did slightly better than reds (80.4 percent). The big talking point was the dominance of velvet and trophy genetics in the sale ring. In the excitement of strong prices for good clean and heavy velvet genetics there was some intemperate talk of the demise of venison as a drawcard at sire sales. But while genetic progress with antler has been spectacular, meat will always be the engine room of the deer industry. The recent success of the industry’s Primary Growth Partnership bid for co-funding a multi-million dollar productivity improvement programme (see page 2) underlines the importance of genetic progress on all fronts – not just antler. And in another positive sign, there was evidence that buyers were starting to look for breeding value information in stags to support their purchase decisions.

Deer Industry News received reports from 13 stag or bull sales, and we also carry summary reports of a further 15 sales, courtesy of PGG Wrightson.

We invited all vendors we were aware of to send in sale reports and we thank those who took the time to do so. Reports can now be submitted online. If you missed out on sending a report, please get in touch and give us your updated contact details so you can be included next season.
## Deer Industry News

### Stag Sale Reports: General News

**Maranoa Deer**

- **12 December, Maranoa, Takapau**
- **Stags sold:** 13 of 24 on offer
- **Top price:** $4,800
- **Average:** $3,300
- **Comment:** Venison sires hard to sell with product pricing at unsustainable levels. This means more hinds will be killed and the industry will shrink further. Very disappointing.

**Netherdale Red Deer**

- **8 January, Balfour, Southland**
- **Stags sold:** 24 of 30 3-year-old red sire stags on offer, plus a further three after the sale.
- **Top price:** $11,758 (range $3,000-$40,000)
- **Average:** $1,630
- **Other animals sold:** 72 two-year-old velvetting stags on offer, all sold, top two pens sold for $2,350, average $1,630.
- **Comment:** Very strong sale; purchasers from both North and South Islands. Buyers were looking for animals with good heavy clean velvet and strong velvet pedigrees. This was reflected in the strong demand.

**Peel Forest Estate**

- **5 December: Forresters™ and Europeans**
- **6 December, Horsfall Road**
- **Stags sold:** 34 of 42 on offer
- **Top price:** $8,000
- **Average:** $5,076
- **Stags sold:** 23 of 28 on offer
- **Top price:** $23,000
- **Average:** $7,756
- **Other animals sold:** Two-year-old velveting stags (Windermere) and three-year-old trophy stags
- **Comment:** First year selling Windermere bloodlines and we are very happy with the response. The animals looked fantastic and the prices and turnout reflected this.

**Riuapenu Red Deer**

- **10 December, Pukenaaua Road, Taihape**
- **Stags sold:** 28 of 28 on offer
- **Top price:** $8,000
- **Average:** $5,293
- **Comment:** 15 stags over 200kg in mid December. Solid sale, slightly up on last year. Thanks to all purchasers.

**Stanfield’s European Red Deer**

- **4 January, Bangor, Darfield**
- **Stags sold:** 32 of 43 on offer
- **Top price:** $5,300
- **Average:** $11,000
- **Comment:** Average of $11,000 was up $1,000 on last year. Five stags over $20,000. Stunning stags with a number over 10kg cut off after the sale and the best left on. This was the last sale for Stanfield; great to go out with such an amazing line up. Our thanks and best wishes to all our supporters over the years.

**Tikana**

- **13 January, on farm at Browns, Winton**
- **Bulls sold:** 14 of 16 on offer
- **Top price:** $23,000
- **Average:** $8,300
- **Other animals sold:** Six of six yearling wapiti cows; average $2,283, top $3,300
- **Comment:** Strong demand for top bulls with a 20% lift in sale average, up $1500. Top bull purchased by Murray Hagén, Connemara.

**Tower Farms**

- **18 December on farm, Discombe Road**
- **Stags sold:** 14 of 21 on offer (3 passed in, 4 withdrawn)
- **Top price:** $18,000
- **Average:** $6,400
- **Other animals sold:** Eight R1 and two-year-old hinds

**Wilkins Farming**

- **12 December 2014, North Island: Te Mai, Hawke’s Bay**
- **12 January 2015, South Island: Wilkins Farming, Athol**
- **Stags sold:** North Island: 13 of 24 on offer
- **South Island: 35 of 50 on offer**
- **Top price:** North Island: $5,000
- **South Island: $13,000**
- **Average:** North Island: $3,478 (includes auction and private treaty)
- **South Island: $3,663**

**Other Sales**

- **Source: PGG Wrightson Deer**

<table>
<thead>
<tr>
<th>Vendor</th>
<th>Sale date</th>
<th>Stags sold/stags offered</th>
<th>Top price</th>
<th>Average price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Forest Deer Park</td>
<td>10 January</td>
<td>20/27</td>
<td>$8,000.00</td>
<td>$3,970</td>
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<td>Canes Deer</td>
<td>17 December</td>
<td>13/18</td>
<td>$30,000</td>
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<tr>
<td>Crowley Deer</td>
<td>19 December</td>
<td>10/10</td>
<td>$11,000</td>
<td>$6,340</td>
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<td>Deer Genetics</td>
<td>6 January</td>
<td>21/21</td>
<td>$20,000</td>
<td>$7,629</td>
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<tr>
<td>Fairlight Station</td>
<td>12 December</td>
<td>12/21</td>
<td>$4,000</td>
<td>$2,725</td>
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<tr>
<td>Foveran Deer Park 1st sale</td>
<td>5 January</td>
<td>61/57</td>
<td>$18,000</td>
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<tr>
<td>Foveran Deer Park 2nd sale</td>
<td>5 January</td>
<td>29/29</td>
<td>$7,000</td>
<td>$2,703</td>
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<td>Pampas Heights</td>
<td>17 December</td>
<td>22/29</td>
<td>$6,000</td>
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<tr>
<td>Ramsa Red Deer</td>
<td>18 December</td>
<td>22/22</td>
<td>$19,000</td>
<td>$4,018</td>
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<tr>
<td>Remarkables Park Stud</td>
<td>10 December</td>
<td>25/32</td>
<td>$3,200.00</td>
<td>$2,370</td>
</tr>
<tr>
<td>Sarnia Deer</td>
<td>19 December</td>
<td>16/16</td>
<td>$30,000</td>
<td>$5,943</td>
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</tbody>
</table>

**Wapiti Bull Sire Sales**

<table>
<thead>
<tr>
<th>Vendor</th>
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<th>Stags sold/stags offered</th>
<th>Top price</th>
<th>Average price</th>
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<tr>
<td>Grandiek Wapiti</td>
<td>13 January</td>
<td>16/16</td>
<td>$2,800</td>
<td>$1,538</td>
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<tr>
<td>Littlebourne Wapiti</td>
<td>13 January</td>
<td>17/23</td>
<td>$9,200</td>
<td>$3,188</td>
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<tr>
<td>Lochimar Wapiti Farm</td>
<td>11 January</td>
<td>24/24</td>
<td>$9,000</td>
<td>$3,580</td>
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<tr>
<td>Raincliff Station Wapiti</td>
<td>16 January</td>
<td>25/32</td>
<td>$4,900</td>
<td>$3,504</td>
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*We had not received reports from these vendors by press time and this summary table is reproduced from PGG Wrightson’s online report as a service to readers. The full PGG Wrightson reports are available through the link provided.*
Reflecting on decades in deer

“We can all become much better deer farmers and will capture the benefits when we do.” Coming from someone reflecting on more than three decades of extraordinary genetic progress in the deer industry, that may be a surprising call. But it’s also very true to the nature of a man who is comfortable with risk and constantly in search of improvement.

The thirtieth and final elite sire sale at Stanfield’s European Red Deer Stud on 4 January brought the curtain down on an exciting era in the growth of New Zealand’s farmed deer industry – and may well signpost a shift in the way genetic improvement is promulgated in future.

Clive Jermy was typically upbeat about the results from the sale. It was well short of the stellar heights achieved during the early 2000s when the auction gross nudged the $1m for the first time and sale averages for English sires were routinely in the $15,000–$20,000 range. But in the context of today’s diminished national herd and tough trading conditions, the sale was solid and he’s content for it to be his stud industry swansong. It was one of only a handful that breached the $10,000 average and, unlike sales with smaller catalogues where one outstanding stag boosts the average, Stanfield’s sold five stags for more than $20,000.

Jermy concurs with the widely held view that this season’s sales were underpinned by the strong market for velvet and trophy genetics and said a number of those in his offering of 43 stags were of “mind boggling” quality. “Our sires are good dual-purpose animals for velvet and venison, and with Warnham and Woburns you get good trophy animals by default.”

Perhaps the biggest buzz he has always got out of selling sires is seeing the high performance of the Warnham and Woburns manifesting itself through other enterprises. “A four-year-old stag at Mount Hutt Station – one of ours – has cut 10.5kg; another cut 8.2kg and three-year-olds are cutting more than 7kg. There’s no shortage of big velvet!”

Since the first Stanfield’s sale 30 years ago, Jermy has built up a large and loyal following. He is concerned that Warnham and Woburns genetics do not get attenuated in New Zealand so Kiwis can enjoy it – seeing it go offshore would be very much a second choice.”

He said three spikers in Stanfield’s most recent crop had 6kg heads, an indication of the “relentless” progress being made.

While it’s unlikely the museum could be maintained in its current form elsewhere, Jermy is hopeful that it can be kept in New Zealand and perhaps as the centrepiece of a deer-themed retail venture. He’s not just talking about a tourist trap for Asian visitors buying velvet products, but a much broader-based operation incorporating clothing, jewellery and food.

“I would like to see the collection maintained in New Zealand so Kiwis can enjoy it – seeing it go offshore would be very much a second choice.”

Jermy became involved in the deer industry nearly four decades ago when, in 1977, he set up a company Deer and Game Services NZ Ltd, which designed and developed

continued on page 16
Mark Arundel Acland: 1939 – 2014

Mark Acland, who passed away on 7 September last year, was a pioneer of the New Zealand deer industry. Together with such foresighted, adventurous, determined and enterprising entrepreneurs as Sir Tim Wallis, Bernard Pinney, Sir Peter Elworthy, Robert Wilson and Tom Williams, he helped to develop the technology of capturing wild deer and then to successfully farm them.

From schooldays, Mark and Sir Tim were best mates and Mark joined him in his helicopter in the bulldozing deer days. One stag took him over a bluff into a rocky river bed which killed the stag and left Mark badly injured.

Besides the thrill of the early days of deer capture, Mark was a keen mountaineer, climbing Mount Cook and Mount D’Archiac among many others.

He was brought up on Mount Peel Station, where he gained his love for the adventure of the wild and also his passion and skill at developing farmland. This was put to good use in partnership with his brother John on Mount Peel, where they undertook extensive development in difficult terrain to substantially increase the stocking capacity of the station.

He purchased Mount Somers in the foothills of Canterbury and moved there with his late wife Jo and their three young sons, David, Ben and Hamish. Here he relished the opportunity to develop the farm for extensive deer farming as well as for sheep and cattle. Mount Somers is now a highly productive station run by his son David.

Mark was very active in the early politics of the growing deer industry and was made an Honorary Life member of the South Canterbury and North Otago Branch of NZDFA.

He was an energetic, enthusiastic and caring person who put a lot into life. His passion for farming was matched by his passion for people. Although a very modest man, Mark achieved a huge amount in his life and will be sorely missed by the deer industry and general farming community, but most of all by his family and friends.

Contributed by Graham Carr

A 60-year friendship

Mark Acland, Robert Wilson and Sir Tim Wallis had many similar experiences in their lives and were often referred to as the “Three Musketeers” in helping develop the New Zealand deer industry. Sir Tim pays tribute to his friend.

I met Mark in January 1952 when we started boarding school and we became great friends. Mark later became very involved with the pioneering of New Zealand’s deer industry. Wild red deer grazed close to the bush on the foothills of the Acland family-owned Mount Peel Station between the Rangitata and Orari Rivers. In those days, the government had decided they were noxious animals. I had just started a new business harvesting wild deer to be processed at my new factory, Luggate Game Packers near Wanaka. As I had flown up to visit and stay with Mark at Mount Peel Station with my Hiller 12E helicopter we shot the wild deer and recovered them to the homestead. Mark’s father Jack Acland was fascinated with this and supported our efforts. Later, as the industry developed and his involvement in deer farming grew, we travelled together to China and then to Russia to learn more.

Mark’s sudden death has been shattering to me and I miss him dearly.

Clive Jermy is hopeful that the Stanfield’s antler museum will remain accessible to New Zealanders, at least in part.

“I started out in business helping others become better deer farmers and it’s something I’d like to keep doing. My passion for the industry has never diminished and helping the industry in any way possible to recover its profitability on a sustained basis is an important goal.”
Fitness traits important too

What value is an extra fawn to your profitability relative to an extra unit of venison or velvet? DEERSelect Manager, Sharon McIntyre, explains the importance of genes for successful breeding.

What might happen long term if we continue to focus predominantly on production traits such as growth/ meat and velvet with little to no emphasis on traits such as reproduction, survival constitution and so on? These types of traits are often referred to as ‘fitness traits’. We know in principle that there are gene variants that increase production traits that are naturally at low levels because they have a negative effect on “fitness”.

It has been observed in other species that fitness traits can decline if the selection focus is predominantly on production traits for a long time. For example, in the USA, days open (time to rebreed) increased genetically in cattle by 24 days or 0.8 days/year between 1965 and 1995. When the New Zealand National Dairy Breeding Objective was reviewed in 2012, the emphasis on fertility was basically doubled. This reflected the significant costs associated with involuntary culling of cows prematurely and the cost of rearing greater numbers of replacements. Sheep and beef indexes include fitness traits in the overall index (breeding objective), such as number of lambs born, calves weaned, lamb and calf survival, calving ease and even, in some cases, disease or parasite resistance/tolerance reflecting their contribution to farm profitability.

DEERSelect breeders have shown rapid gains in production traits since the scheme’s inception in 2005, but we need to work towards having a more balanced approach that includes key fitness traits. This will require a combination of some science, commitment on the part of breeders to record extra traits and demand from commercial farmers to encourage and reward breeders to record these traits. In discussions I have had with commercial farmers over the past two years, aspects of conception rates, weaning rates as number of lambs born, calves weaned, lamb and calf survival, calving ease and even, in some cases, disease or parasite resistance/tolerance have been common themes.

The time is right to start working towards some of the ends.

Generally fitness traits show a lot of variability due to environmental or management influences and have a low heritability, so an individual record on an animal is not a good indicator of genetic merit for these traits. It requires the power of numbers on related animals to distinguish between chance effects and genetic effects.

For example, two first-calver hinds from separate sire families of 20 half sisters both scan dry. One is the only dry hind out of 20, the other is one of three dry hinds out of 20 – this begins to look suspicious. If these stags have been used before, there will be more records and previous hinds or relatives in the herd that can help verify if there is a family pattern showing up. Add in that some stags have been used in previous years and we know the dry rates in these hinds. The computer uses information on all known relatives to estimate merit. It will take some time to accumulate sufficient depth of records to start developing estimates for these traits.

A start has been made through the Deer Progeny Test with, recording of first and second calver conception rates and conception dates and work on proof of concept of the CARLA® saliva test as an indicator of parasite immune status. However much more data is required to get to the point of having useful breeding values and being able to incorporate maternal traits into the index.

It is the old chicken and egg argument. The science requires an accurate set of data to derive the genetic parameters from, so that it can generate a breeding value and potentially include it in a breeding objective (index). But to have that set of data requires breeders to record a trait before breeding values are available for it, which is not very motivating.

Recording pregnancy scanning data is the easiest place to start; fawn survival is a little harder, as many breeders use DNA parentage to determine parentage. Obviously only live fawns are sampled and sometimes not all are included, which may lead to an overestimate of deaths. Recording which hinds did not have an udder at weaning is another possible approach.

DEERSelect is only a decade old but it is time we start progressing to a more balanced approach that includes fitness traits in the breeding objective.

References
3. www.carlasalivatetest.co.nz (accessed 4 February)
Well-trained palates on Alliance taste panel

Sonja Lindsay knows a thing or two about why New Zealand venison, lamb and beef is favoured by consumers across the globe. The Alliance Group food technologist has cooked and tasted more legs of lamb and venison striploins than most, writes Gerard Hall.

One of four staff in Alliance Group’s state-of-the-art Product Development Centre (PDC), cooking and tasting venison is all in a day’s work for Sonja.

Established 25 years ago in what used to be the Lorneville butcher shop near Invercargill, the PDC is an important part of the co-operative’s “farm to fork” strategy.

“We aim to replicate the conditions for what happens at each stage in the supply chain from processing through to the point of sale where consumers chose their preferred cut of venison, beef or lamb at their local supermarket or deli. This is often on the other side of the world, in countries such as the United Kingdom, India or Brazil,” Lindsay says.

The centre, which includes a top-of-the-range kitchen and dining room, is where new and emerging technologies and processing techniques are developed and fine tuned, innovations evaluated, new product offerings developed and packaging and presentation designed and tested.

Lindsay’s insight into the centre’s inner workings includes the role taste panels play in enhancing New Zealand’s already well-regarded venison ensuring the eating experience lives up to expectations and is consistent year on year, anywhere in the world.

“Our customers use this information to understand what types of product will suit their needs and match what their consumers are looking for. It is about providing them with a complete picture, using a scientifically robust process.”

With no shortage of volunteers putting their hands up, Alliance Group has been using trained panellists to evaluate beef, lamb and venison for more than 15 years.

Before taking a seat at the table, the panellists, all Alliance Group staff members, have to successfully negotiate the triangle test.

“This involves them being given six plates, each having three samples of loin meat, and being able to identify the odd one out on each of the plates,” Lindsay explains. “They need to get five out of the six correct to be on a panel.”

Panellists, eight at a time, sit around a table informally for around 30 minutes. Apple juice is provided to cleanse their palates between samples.

Before they arrive, Lindsay is flat out in the kitchen cooking the meat samples on a hot plate until they are pink in the middle. To ensure that the flavour of the meat is not tainted, no other products – even oils – are used in the cooking process.

Panellists score samples for aroma, flavour, texture and succulence and then give each one an overall rating out of nine.

Most of the tastings happen during the off season months. July, August and September are the busiest, with tastings scheduled every afternoon.

Replicating the time to market, among the venison products evaluated are those from Alliance Group’s sea freight chilled, aged frozen (5–21 days) and frozen categories.

Lindsay says the results are robust and the panellist texture scores correlate well with the scores when the same piece of meat is tested using a tenderometer. Meat colour is also tested using a colorimeter.

The development centre team also plays a key role in many industry-led research and development initiatives including evaluating the eating qualities of the progeny from the Deer Progeny Test and equivalent initiatives in the lamb industry.

Excited by the opportunities for venison, her favourite red meat, Lindsay relishes being part of a team at the cutting edge.

“Allied with the PGP initiative [Passion 2 Profit] set to start, there can only be exciting times ahead.”
Elk/Wapiti Society get heads together in Wanaka
by Gerard Hall, Deer Industry News writer

More than 60 of the best quality velvet heads laid out on white table cloth made for an impressive sight in Wanaka last month.

The occasion was the Elk and Wapiti Society of New Zealand’s annual awards evening held at the Edgewater Resort, where the country’s top Elk and Wapiti velvet and hard antler heads were to be found.

As well as recognising excellence, the industry showcase featured an insight from Alliance Group food technologist Sonja Lindsay into the role tasting panels play in enhancing the reputation of New Zealand venison (see accompanying article) plus a fashion show featuring items from the collection of Christina Perriam’s new label PERRIAM.

Designing women’s wear and babies and children’s clothing for the past 10-years, the well-known Central Otago fashion designer entertained with her label story. She launched her luxury merino PERRIAM label at Bendigo Station last October.

The Elk and wapiti Society awards showcase, which rewards excellence and celebrates breeders’ success, attracted more than 60 heads of velvet from across the country. Rounding off the increased numbers of entries this year, was the nine hard antler heads.

And, with more 20+kg heads of velvet on show than ever before, the genetic improvement being made was evident.

“Ten years ago an elk or wapiti bull cutting more than 15kg of velvet was the exception rather than the rule,” awards convenor John Falconer said.

“Now we are seeing multiple sons of Trilogy, New Zealand’s first 25kg velvet bull, coming through. And there are others [sires] out there reflecting the improvement breeders are making in what is a relatively young industry.”

While venison prices might be somewhat sluggish, Falconer and fellow breeder Paul Waller are welcoming the more favourable prices they have received for this season’s velvet crop.

Nathan Hawker who with his father Graeme is a major buyer of elk and wapiti velvet and principal awards sponsor, said their clients are averaging up to $30/kg more for their velvet than last year.

Also a competition judge, Hawker said the firming in velvet price reflects the combination of more favourable trading conditions and increased competition for New Zealand-grown velvet, recognised as amongst the best in the world.

“With the increasing competition and more interest from China, other markets have been forced to compete. The upward movement in price is also the result of the demand for velvet from younger animals,” Nathan adds.

The strengthening in demand has resulted in the price for high-quality regrowth and spiker velvet now pushing up towards $200/kg.
When Dallas and Sarah Newlands and Dallas’s parents added Maraeweka, a new 312-hectare farm to their Viewmont enterprise in October 2013, deer were part of the setup. The North Otago family already had a 200-hectare home farm with a 90 hectare block next door.

Dallas’s father Alec had been in deer since the early 1990s and they are strongly committed to continuing with the venison business. It fits well with their cropping, cattle grazing, calf raising and dairy bull operations. At present they have 700 hinds including 120 hybrids, using Forresters™ for breeding replacements and B11 terminal sires.

It didn’t take them long to notice that things weren’t quite right with the bought-in deer on the new property. They were unsettled and the scanning and calving results were very poor. Dallas and Alec decided action was needed to improve performance.

The Newlands family business has a lot on. As well as the cropping and livestock they also run a contracting business (something that helps keep the costs down for high-value crops like fodder beet). That means having good systems in place to ensure things get done when they’re needed and the stock are monitored.

Dallas admits that because deer are relatively easy care and there is plenty of other work on, essential jobs can be overlooked or delayed. This is especially so when the planning is carried around in the head.

“I want to be proactive – to prevent problems instead of having to cure them.” He’s done a couple of things to help ensure this can happen.

First, he’s become part of the South Canterbury/North Otago Advance Party¹, chaired by Martin Rupert. At a recent Advance Party meeting at Viewmont, discussion centred around nutrition as well as hind health, genetics and finishing weaners. Suggestions of strategic use of palm kernel were useful, Dallas says.

It’s an hour’s drive north to where most of the other Advance Party members are, but it’s a journey he’s happy to make when visiting other farms. “It’s a great way to swap ideas and learn. I’m pretty much surrounded by dairying here in North Otago so it’s fantastic to get to know other deer farmers.” The Advance Party group has visited each farm and will now be knuckling down with their objectives and measuring the impact of the changes being made.

Second, he’s developed excellent working relationships with

¹Advance Parties are a system developed by DiNZ to help farmers increase profitability. The three-year trial is co-funded by the Sustainable Farming Fund. At the end of the first year there were eight Advance Parties underway, involving 89 farms.
the rural professionals involved with the farm. One has been his Oamaru Rabobank manager, Hamish Low, who has been very supportive of the Newlands’ plans to develop the business.

Another is his veterinarian, Luke Smyth of the Oamaru Veterinary Centre, who first came into contact with the Newlands family when he was on the property Tb testing and velvetting. “I got Luke on board during winter 2011. He’s a young and very positive vet who takes a strong interest in our business – and he’s passionate about deer.”

Luke has worked with Dallas and his father Alec to develop a simple animal health plan to ensure the essential tasks are done with active monitoring to ensure further action can be taken if needed (e.g. supplementary feeding).

The idea of a seasonal checklist isn’t particularly new, but what makes this special is that it was put together in partnership with vet and farmer. And although the consultant in this case is the vet, it’s about far more than when to administer vaccines and drenches.

”I want to be proactive – to prevent problems instead of having to cure them.”

The starting point was to document goals for the farm and these will be familiar to most: more hinds in calf, calving as early as possible, bigger weaners, maximising kill before 20 November and avoiding taking slaughter stock through a second winter. Broader plans for the farm include pasture renewal and increasing bull numbers with fewer heifers.

Luke says that as a vet it would be easy to see things purely in animal disease terms. ”It’s a lot more than that. We narrowed it down to four main areas: nutrition, parasites, trace elements and disease.”

From there they developed a stock policy covering timing for weaning, management of hind body condition score, timing for mating, scanning and set stocking.

There is a long history of pour-on use at Viewmont, and Luke Smyth is wisely recommending a policy of quarantine drenching for bought-in stock plus a regular drenching programme using a triple combination, especially during the late summer–autumn period. He’s also recommending a number of non-chemical parasite control options, including cross grazing with cattle.

continued on page 22
using alternative forages such as chicory and plantain and
use of “refugia” where undrenched good-condition adults
are used to “seed” drench-susceptible worms onto pasture
and combat the build-up of resistant parasites.

Dallas admits he omitted a pre-weaning drench last year
during a good autumn with lush pasture growth and was
punished by widespread lungworm in the susceptible
young animals. “If you’re growing grass, you’re also growing
worms.”

The objectives have been translated into a year planner
with month-by-month activities set out for stags, mixed-
age hinds, maiden hinds and R1s. It’s all set out on a
laminated A3 poster that can go up on the office or shed
wall. Following the plan does require some monitoring,
especially pasture cover and
liveweights, and the schedule of work is
tweaked depending on seasonal
conditions.

Luke is recommending caution to
help ensure pastures aren’t grazed
too short, thus exposing young
stock to parasite larvae. He’s also
recommending the Optigrow service
for monitoring copper and cobalt
status (deer and cattle are regularly
coppered).

Infectious diseases haven’t been
a major issue to date. For example,
there is no history of Johnes’s disease
or clinical leptospirosis. However,
Luke is recommending a preventive
approach to protect weaners from
yersiniosis. By administering the two
shots of YersiniaVax® to weaners at the
same time as their scheduled drenches
in February and March, there is no
additional stock handling required.

Elk/wapiti comp: continued from page 19

After much deliberation by the five judges, Dave Lawrence
and Donna Day’s elk bull Nepia defended his Champion
of Champions title. Now a five-year-old, the Tikana sire
took out the title for the third year running, reinforcing his
reputation as a trait leader.

Reserve champion was Seattle, Whyte Farming’s four-year-
old, with 410 inches of hard antler.

Paul and Sharon Waller’s six-year-old sire HJ also featured,
taking out the top prize in his age group.

Before the evening ended, Hawker Deer principal Graeme
Hawker took little time in emptying a few pockets when
auctioning a range of donated goods including a five-
day stay in Te Anau, a tuna fishing experience, PERRIAM
vouchers, Cydectin Injection drench, Z-tags and semen
from Playboy and Magic.

By the time he had finished, another $6,500 was in the kitty
for continuing the society’s research into more effective
internal parasite control practices.

It’s only been about three months since the plan was
formulated – vet and farmer will know a lot more at the end
of the first year. But Dallas is confident that the investment
in getting the plan together will be more than repaid. Once
the current crop of fawns come in for weaning they will
have a better idea of how things are progressing, but despite
the dry conditions Dallas is already liking what he’s seeing
in terms of weaner size and condition.

Luke Smyth says a lot of the hard work putting an animal
health plan together goes in at the beginning, when
baseline information is mapped out and objectives agreed.

“When that is in place, it’s a matter of reviewing and
adjusting the plan as time goes on. Dallas is engaged and
motivated, and that’s the secret to these plans working well.
I’ll be encouraging other deer farmers to try it too.”

Elk/wapiti comp: continued from page 19

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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

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 Productivity 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 on-farm. 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.

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.

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-focused 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

An extract from the financial statements of DEEResearch Limited for the year ending 30 June 2013 is set out in Tables 1 and 2 for general information purposes only. A full set of audited financial statements and the accompanying audit report are available on the DEEResearch Limited website (www.deeresearch.org.nz).

RESEARCH PROGRAMME HIGHLIGHTS

A summary of DEEResearch projects in the 2013/14 year is provided in Table 3 and reports on project progress are provided in Table 4.

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 Johnne’s disease-focused 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 a disease simulation, on account of the 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 5.
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)

DEEResearch Limited
STATEMENT OF FINANCIAL PERFORMANCE
TABLE 1
For the year ending 30 June 2014

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<tr>
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<th>2014 $</th>
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<td>Research Income</td>
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<td>Deer Industry New Zealand Research Trust</td>
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<td>AgResearch Limited</td>
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<td>Research Expenditure</td>
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<td>Funded by FRST through AgResearch</td>
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<td>Research Projects</td>
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<td>Other Expenditure</td>
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<td>34,648</td>
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<td><strong>Net Result After Taxation</strong></td>
<td><strong>(52,653)</strong></td>
<td><strong>98,042</strong></td>
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DEEResearch Limited

STATEMENT OF MOVEMENTS IN ACCUMULATED FUNDS
For the year ending 30 June 2014

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<tr>
<th></th>
<th>2014</th>
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<td><strong>Opening Accumulated Funds</strong></td>
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<td><strong>Net Result After Taxation</strong></td>
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<td><strong>Total Recognised Gains and Losses</strong></td>
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<td><strong>Closing Accumulated Funds</strong></td>
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STATEMENT OF FINANCIAL POSITION
As at 30 June 2014

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</thead>
<tbody>
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<tr>
<td><strong>Retained earnings</strong></td>
<td>$169,020</td>
<td>$221,673</td>
</tr>
<tr>
<td><strong>Accumulated Funds</strong></td>
<td>$169,140</td>
<td>$221,793</td>
</tr>
<tr>
<td><strong>Represented by:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Assets</td>
<td>$211,201</td>
<td>$178,588</td>
</tr>
<tr>
<td>Non Current Assets</td>
<td>$233,615</td>
<td>$286,140</td>
</tr>
<tr>
<td>Current Liabilities</td>
<td>$(206,123)</td>
<td>$(173,510)</td>
</tr>
<tr>
<td>Non Current Liabilities</td>
<td>$(69,553)</td>
<td>$(104,455)</td>
</tr>
<tr>
<td><strong>Net Assets</strong></td>
<td>$221,793</td>
<td>$123,751</td>
</tr>
</tbody>
</table>

The complete set of Financial Statements were approved and signed on behalf of the Board of Directors by C Isaacs (Chairperson) and D Coup (Director) on 21 November 2014

SUMMARY OF DEERESEARCH PROJECTS IN 2013/14

<table>
<thead>
<tr>
<th>SHORT TITLE</th>
<th>PERIOD OF PROJECT</th>
<th>FUNDING ($K)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>DINZ</td>
</tr>
<tr>
<td><strong>Pan-sector consortia</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Johnne's Disease through Johnne's Disease Research Consortium</td>
<td>2008-2013</td>
<td>-</td>
</tr>
<tr>
<td><strong>Industry-led productivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venison Supply Systems Programme (lead contractor being AgResearch)</td>
<td>2007-2013</td>
<td>-</td>
</tr>
<tr>
<td>Hitting Targets for Deer Industry Profitability</td>
<td>2013-2018</td>
<td>1,708</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foetal Wastage</td>
<td>2012-2014</td>
<td>270</td>
</tr>
<tr>
<td>Molecular markers for resistance or susceptibility to Johnne's disease</td>
<td>2013-2015</td>
<td>250 p.a.</td>
</tr>
<tr>
<td>VSSP review</td>
<td>2013/14</td>
<td>16</td>
</tr>
<tr>
<td>Dose-dependent anthelmintic studies</td>
<td>2013/14</td>
<td>35</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>Unknown</td>
<td>577</td>
</tr>
</tbody>
</table>
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.

Some unfinished projects continued into 2013/14

Accrued from unfinished milestones in 2012/13

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.

$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>
<thead>
<tr>
<th>SHORT TITLE</th>
<th>PURPOSE</th>
<th>PROGRESS BY 30 JUNE 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methane mitigation</td>
<td>- Identify, establish and develop on-farm technologies to improve production efficiency for ruminants</td>
<td>- Commercialisation plan reviewed and considered fit-for-purpose.</td>
</tr>
<tr>
<td></td>
<td>- 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</td>
<td>- 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 phenotype measure is validated.</td>
</tr>
<tr>
<td></td>
<td>- Exploit commercial opportunities arising from the science and technologies in a global market</td>
<td>- Low GHG Forage: Evaluation of Rape and Brassicas is continuing, research into cause of Rape’s lower emissions is also continuing.</td>
</tr>
<tr>
<td></td>
<td>• Commercialisation plan reviewed and considered fit-for-purpose.</td>
<td>• 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 engaging a commercial partner.</td>
</tr>
<tr>
<td>Pastoral Genomics</td>
<td>• 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</td>
<td>• 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 in vivo substances against unique methanogen enzymes within a rumen methanogen.</td>
</tr>
</tbody>
</table>

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
<table>
<thead>
<tr>
<th>SHORT TITLE</th>
<th>PURPOSE</th>
<th>PROGRESS BY 30 JUNE 2014</th>
</tr>
</thead>
</table>
| **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. |
<table>
<thead>
<tr>
<th>SHORT TITLE</th>
<th>PURPOSE</th>
<th>PROGRESS BY 30 JUNE 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seasonal Growth Pathways</strong></td>
<td>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).</td>
<td>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.</td>
</tr>
<tr>
<td><strong>Physiology of Puberty</strong></td>
<td>The effects of early-life (pre- and post-natal) growth on body tissue composition and entry into puberty are understood.</td>
<td>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.</td>
</tr>
<tr>
<td><strong>Managing Deer Parasites</strong></td>
<td>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.</td>
<td>Genetic outliers: Analysis of weaner liveweight 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.</td>
</tr>
<tr>
<td><strong>Toxoplasma Vaccination</strong></td>
<td>Efficacy of Toxoplasma vaccination in reducing foetal wastage in R2 hinds is determined.</td>
<td>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.</td>
</tr>
<tr>
<td><strong>Deer Progeny Test</strong></td>
<td>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.</td>
<td>Five science journal papers on deer parasitology were submitted for publication.</td>
</tr>
<tr>
<td><strong>DEERSelect</strong></td>
<td>Operate, maintain and develop the platform by which genetics information is stored, analysed and disseminated to the deer industry.</td>
<td>A pharmacokinetic study was completed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deer Hub module developed on outcomes of parasite research</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parasite cross-grazing study: First year field and laboratory work completed; study report and article in VetScript ensued.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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. First year of trial work completed and reported.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>On-line tutorial and associated field handbook developed on foetal ageing for up-skilling scanning operators.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Module implementation: The use of gBreed in DEERSelect was postponed through data limitation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assistance provided for review of animal ID recording and the integration of NAIT Tags into DEERSelect.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Revised DEERSelect indices to address industry concerns about technical and useability limitations</td>
</tr>
<tr>
<td>SHORT TITLE</td>
<td>PURPOSE</td>
<td>PROGRESS BY 30 JUNE 2014</td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Genomics</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>DEERLink</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Improving OVERSEER for deer</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Foetal Wastage</td>
<td>Determine the incidence and prevalence of foetal wastage and develop and/or apply serum diagnostic tests for potential pathogenic causes of foetal wastage.</td>
<td>Incidence and prevalence studies completed and reported on at Conference. Final report awaited.</td>
</tr>
<tr>
<td>Molecular markers for resistance or susceptibility to Johne’s disease</td>
<td>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 Map infection.</td>
<td>Biomarkers have been selected and tested, but some technical issues regarding scaling down the test sample size are yet to be resolved.</td>
</tr>
<tr>
<td>VSSP review</td>
<td>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.</td>
<td>Review completed identifying low rate of adoption as a major impediment for the programme and industry</td>
</tr>
<tr>
<td>Dose-dependent anthelmintic studies</td>
<td>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.</td>
<td>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.</td>
</tr>
</tbody>
</table>
## A SUMMARY OF DEERESEARCH PROJECTS IN 2014/15

### TABLE 5

<table>
<thead>
<tr>
<th>TYPE OF INVESTMENT</th>
<th>SHORT TITLE</th>
<th>PERIOD OF PROJECT</th>
<th>DINZ 2014/15 CONTRIBUTION (S$K)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pastoral Genomics through Pastoral Genomics Research Consortium and PG+</td>
<td>2002 - 2015</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Johne's Disease through Johne's Disease Research Consortium</td>
<td>2008 - 2016</td>
<td>-</td>
</tr>
<tr>
<td>Industry-led productivity</td>
<td>Venison Supply Systems Programme (lead contractor being AgResearch)</td>
<td>2007-2013$^a$</td>
<td>18.7$^a$</td>
</tr>
<tr>
<td></td>
<td>Hitting Targets for Deer Industry Profitability</td>
<td>2013-2018</td>
<td>439.7$^b$</td>
</tr>
<tr>
<td>Other</td>
<td>Molecular markers for resistance or susceptibility to Johne's disease</td>
<td>2013-2015</td>
<td>80$^{11}$</td>
</tr>
<tr>
<td></td>
<td>Parasitology research summit</td>
<td>2015</td>
<td>3</td>
</tr>
</tbody>
</table>

$^a$ Some unfinished projects continuing into 2014/15

$^b$ 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.
A CLEAN BILL OF HEALTH

Give your deer and profits a clean bill of health, by actively managing these eight diseases.

There are eight diseases that are common in deer farming. Along with deaths through misadventure, these can have a significant negative impact on your farm productivity even though the symptoms might not always be visible. With active management, you will improve productivity and increase your venison returns. Let them take over and these diseases could have a significant impact on your animals and your profitability.

THE EIGHT COSTLY DISEASES TO LOOK OUT FOR ARE:

- Internal parasites
- Johne’s disease
- Fusobacteriosis
- Ticks
- Leptospirosis
- Yersiniosis
- Tuberculosis
- Copper deficiency

Make a habit of checking for the signs and seeing your vet, and you could make yourself a whole lot happier, healthier, and wealthier.

Find out more about the signs and impacts at: deernz.org/deerhub