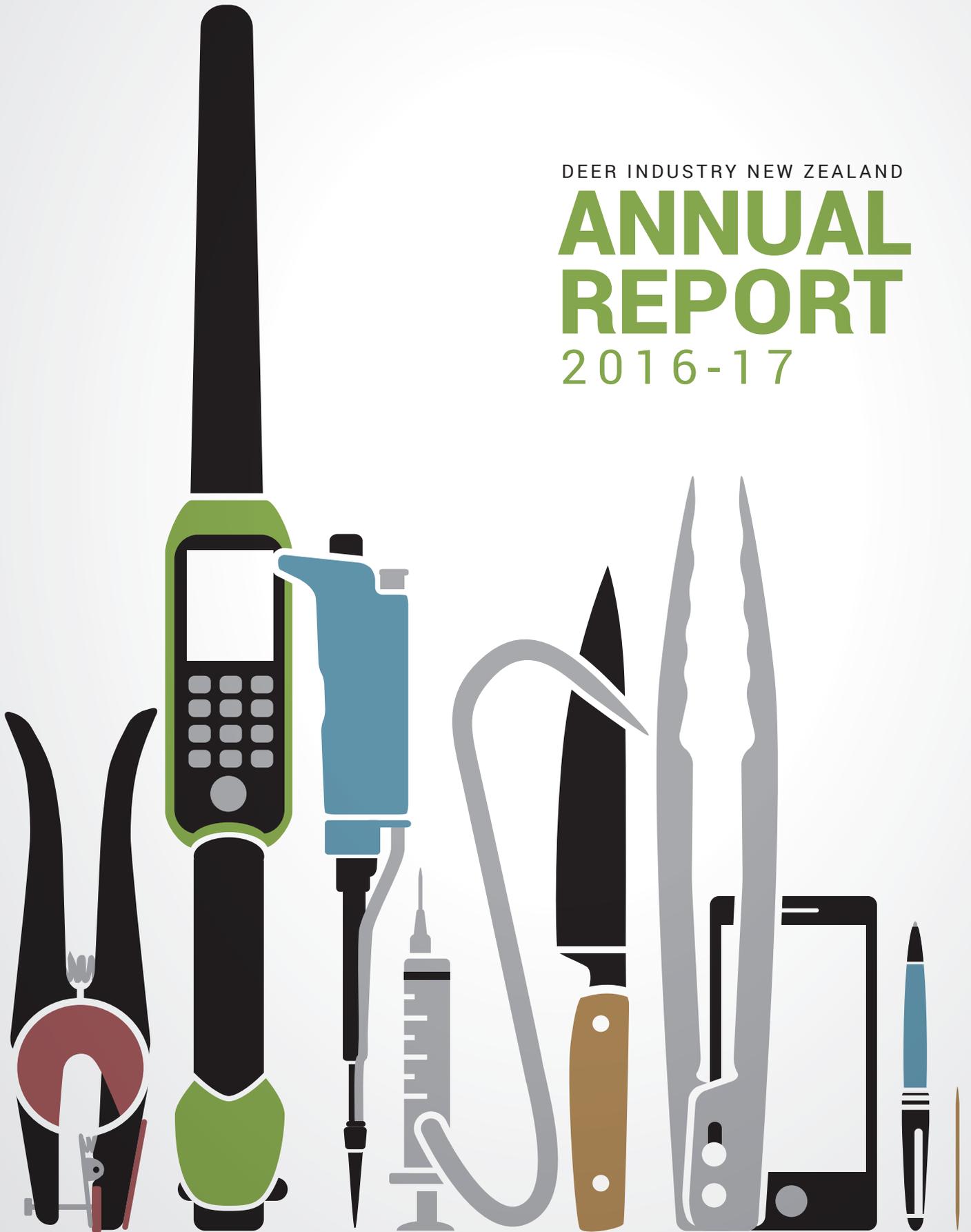


DEER INDUSTRY NEW ZEALAND

ANNUAL REPORT

2016-17



FROM THE CHAIRMAN



It was my privilege to take up the role of Chairman from 1 July 2017, when Andy Macfarlane stepped down after seven very productive years at the helm. Andy made an outstanding contribution during his term, not least of which was the securing of the Primary Growth Partnership that forms the basis of the seven-year Passion2Profit (P2P) programme.

The DINZ Board went through something of a renewal phase, with three new appointees bringing diverse and valuable experience to the table. Mark Harris has an extensive corporate and marketing background, working with some of the technologies that are helping improve productivity in our sector. Kris Orange has proven leadership skills and will further strengthen the already good linkages between DINZ and the deer farming community. And Tony Cochrane brings fresh impetus to the velvet sector's efforts to enhance quality and product integrity throughout the supply chain.

I would also like to acknowledge the contributions of outgoing Board members Clive Jermy and Colin Stevenson, each of whom brought tremendous experience and insight during their terms.

There were further indications throughout the year that the pace of change in our markets is accelerating. Our venison business has been going through a rebalancing, with some welcome diversification and signs that years of efforts to generate demand outside the traditional northern autumn period are starting to pay off.

The velvet sector had its challenges but these were fairly short-lived and were a response to the regulatory changes taking place both in New Zealand and in China, our biggest export destination. While the fall in velvet prices during the 2016/17 season was unsettling for many, there were signs by the end of the reporting period that the longer term trend of firming prices and growing volumes was returning. Farmers are to be congratulated for the effort and skill applied to upgrading their on-farm velvetting facilities to meet the requirements of the Regulated Control Scheme – it has set us up well for the future.

The Advance Party network – a major component of the P2P programme – grew further. The 25 groups that are up and running now incorporate more than 10 percent of all deer farms and this reach is extended much further through regional workshops and other activities. While the good market conditions certainly help lift the mood, I'm also detecting a growing sense of collegiality and willingness to learn within the industry, which is great to see.

The four main P2P theme groups are helping bring new technologies and tools to farmers' attention, equipping them to better monitor performance and introduce improved genetics, health management and nutrition to boost productivity.

It has also been encouraging to see the P2P market activities starting to get more traction and a growing commitment from our processor/exporters to diversify their business in collaboration with a loyal group of in-market partners.

The DINZ team, ably led by Dan Coup, has provided another sterling year of service and the Board extends its thanks.

While the coming year is bound to have its challenges, we can look forward with confidence.

Ian Walker, Chairman

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FROM THE CHIEF EXECUTIVE OFFICER



The landscape of our main markets continued to shift this year. The differences between seasonal lows and highs for venison have become much smaller, which has given producers and marketers more options and has been underpinned by strong demand.

While restricted supply has played its part, so too have the bold initiatives taken by our five main venison processor/exporters. For some, venison represents only a small part of their business but it also has strong symbolic value as a high-quality, healthy product.

The expansion of Cervena™ into European summer markets has taken determination and commitment in this supply-constrained environment and it's pleasing to see that effort starting to be rewarded. The Arby's venison sandwich promotion in the United States has injected some fun and excitement, and shows that we should never let our imagination be limited by the way things have been done in the past. And efforts to bring venison to New Zealand consumers in a form they want are also to be commended. This report has more details of these initiatives.

The velvet sector negotiated some choppy waters as new on-farm hygiene regulations and also new regulations for Chinese importers came into effect and prices took a dip. However the industry has met these challenges and things are looking positive, particularly with the growing demand for velvet as a valued component in the healthy functional foods segment. Even more encouraging has been the strong promotion of New Zealand as the origin of these ingredients.

Our environmental and animal welfare credentials are among our biggest assets and also need careful protection. The change of government and likely redefinition of water quality objectives has added some uncertainty for all farmers. However, the deer industry work that is underway on an environmental code of practice and encouragement for deer farmers to set up farm environment plans has started us in the right direction to help meet changing expectations as they are implemented through regional plans.

The deer industry is well equipped to deal with challenges such as these, and there has been a strong level of producer engagement throughout the year. DINZ has been pleased to be able to support initiatives such as the NZDFA Next Generation programme and new communications platforms to help spread ideas and encourage uptake of good management practices.

The Passion2Profit programme is now well under way and continuing to evolve. While activities such as Advance Party regional workshops deservedly receive a high profile, the day-to-day work of DINZ – quality standards, policy, science planning, producer engagement, market joint ventures and much more – is also progressing well, as this report will show.

Doing this work in the face of shrinking levy income has required some care and discipline. The first "green shoots" of a rebuilding in the national deer herd are starting to look stronger, but it has been pleasing to see all those in the industry – including the dedicated and hard-working staff in the DINZ office – making the best possible use of the resources at their disposal.

Dan Coup

Dan Coup, Chief Executive Officer

VENISON

YEAR IN REVIEW

- Overall demand for New Zealand farm-raised venison strengthened as the year progressed. Prices for New Zealand venison climbed steadily due to the combination of low stocks, strong demand in a diversified range of markets and constrained supply.
- The average export value of venison (FOB) was up 9% on 2015/16 at \$ 18,830 per tonne. A weighted average venison schedule (AP – Stags and Hinds) lifted from \$7.64/kg in 2015/16 to \$8.32/kg in 2016/17.
- The volume of venison exported was down 9% year on year to 11,940 tonnes, reflecting lower overall deer numbers, exacerbated by hind and stag retention for herd rebuilding.
- The New Zealand dollar (NZD) weakened against the US dollar (USD) and euro. At the close of the financial year the NZD was down 5% year on year against the euro and flat against the USD. The weakening of the NZD contributed to farmgate venison schedule increases.
- Demand for venison in the United States had a noticeable impact on the New Zealand venison schedule, underpinning higher prices and also shifting the curve with a smaller differential between the chilled season peak and off-season pricing (Figure 2).
- The United States overtook Germany as New Zealand’s largest export market by direct export, although Germany remained New Zealand’s most valuable market (Figure 1).
- Venison co-products made a valuable contribution to farmgate returns, with increases in prices of deer bones and meal.
- The 2016/17 year finished strongly for venison producers, with heavier carcasses, the schedule heading toward \$10/kg and solid market fundamentals signalling an expected period of strong profitability for the sector (Figure 2).

Figure 1: Top five New Zealand venison markets by value 2011/12 and 2016/17 (\$NZ million)

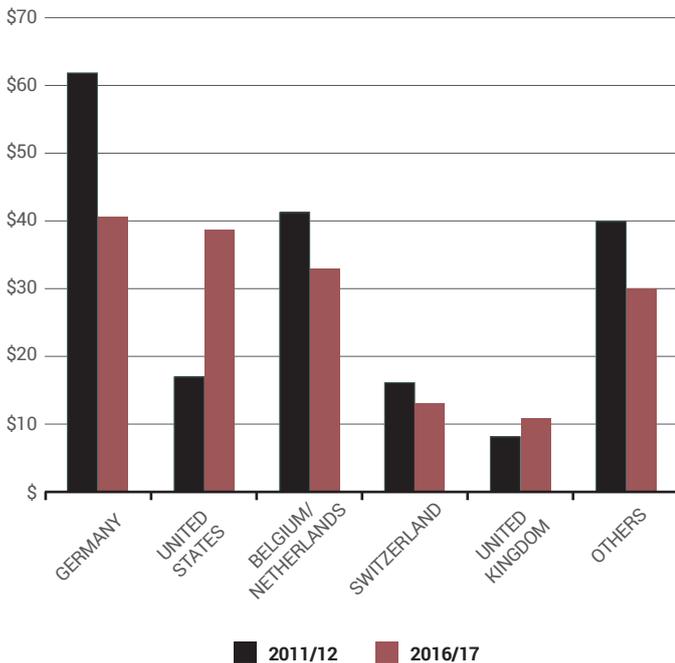
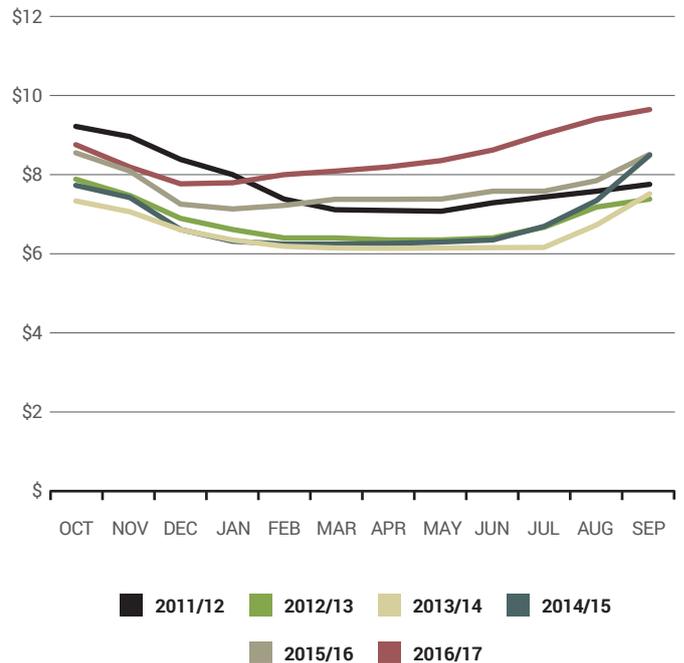


Figure 2: Published average venison schedule AP Stag \$/kg gross



POSITIVE MARKET DEVELOPMENT AND DIVERSIFICATION

US Case Study: Arby's

In 2016 Arby's, a US quick-service restaurant chain, created a social media storm by offering a New Zealand venison sandwich to coincide with the opening of the hunting season in a small number of US states.

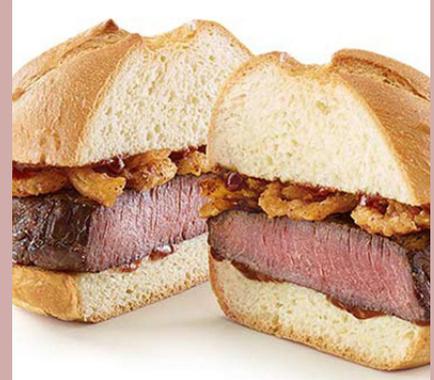
The venison sandwich was offered as a promotion to boost the profile of Arby's as a restaurant that serves a wide variety of good-quality meats. Arby's meat buyers worked with Mountain River Venison to produce a steak cut from the leg that met exact specifications for portion size and cooking time.

The media coverage of the venison sandwich exceeded all expectations, with queues forming outside restaurants and supplies selling out within minutes. The venison was identified as coming from free-range farms in New Zealand. The reaction to the burger was overwhelmingly positive, a result that convinced Arby's to repeat and expand the promotion in 2017.

The importance of the 2016 trial was not the volume sold – it was the positive reaction from a mainstream American audience to an imported venison item. The Arby's' promotion demonstrated that the negative associations many Americans have had toward venison (think Bambi, think uncle Jim-Bob's shot buck on the hood of the pick-up) is not such an impediment when venison is served in a familiar form and setting.

This may open the way for other larger US customers to consider including a venison item on their menus if price points can be accommodated.

DINZ and venison marketing companies are working with large volume users in the United States to create more opportunities to sell greater volumes of lower-priced items in that market. This is in conjunction with ongoing activity to ensure chefs understand the premium attributes of Cervena™ venison.



Arby's venison sandwich



Responses to the venison promotion in Arby's Twitter feed

China case study: Shanghai

New Zealand exporting companies have been looking toward China for many years, but limited formal access impeded any serious market development. With a formal access arrangement approved for export premises over the past several years, marketing companies agreed that it was timely to investigate opportunities for venison in mainland China.

A cultural aversion to eating venison among Chinese was well known, as was the reputation for venison from Chinese deer to be of inferior quality. Venison is not a natural part of many Chinese culinary traditions, so the path to market in China will not be easy.

However, a rapidly westernising restaurant scene in most large cities, a growing desire for secure supplies of safe, high-quality food and a desire for authentic connection to food producers will present opportunities to sell venison in China at prices comparable to other markets.

Mountain River Venison is working with kiwi Hunter McGregor to prise open the upper end of the restaurant market for New Zealand venison in major Chinese cities. Hunter has established an importing company, Shanghai Rata, and offers farm-raised venison to hotel and fine dining restaurant chefs.

The main means of convincing chefs to try venison is by face-to-face persuasion and providing samples for chefs to try once access has been gained past food and beverage managers. Deliveries are often undertaken personally, due to the complexities of the distribution system in China.

At the end of 2016/17, Hunter has won over many chefs with the quality and consistency of New Zealand venison and has regular orders, although volumes remain small. Hunter has been assisted by DINZ through the provision of chefs for training and running promotional events.



Shanghai at night

New Zealand case study: Silver Fern Farms retail

Silver Fern Farms invests significant time and energy promoting venison in New Zealand and has been rewarded with steadily growing sales and an increasing number of outlets offering venison. Along with other suppliers to the local market, farm-raised venison is now available in all good supermarkets throughout New Zealand, something to be celebrated.

However, convincing first-time trial and encouraging repeat purchase is not easy for expensive meats that are not a regular part of the diet. In store tastings, targeted email marketing, collaborations with food writers and attending food fairs require time, money and energy to secure space in the weekly shopping basket. Silver Fern Farms' retail promotion in New Zealand is assisted with funding from Deer Industry New Zealand.



Silver Fern Farms Venison Medallions pack

NEW ZEALAND VENISON PRODUCTION

Venison production for the 2016/17 year totalled 16,630 tonnes (carcass weight) from 291,000 deer.

The average carcass weight reached a new record of 57.23kg, up from 55.65kg the year before. The increase was due to:

- more stags being farmed through to two year olds to assess velvet potential before being slaughtered.
- more deer being kept through to summer to benefit from the relatively higher summer schedule.
- increased growth rates due to improved genetics, reduced stocking rates and better feeding.

For the year, hinds remain 48.5% of the total kill.

VELVET

CHALLENGES AND ACHIEVEMENTS

- A delay in issuing velvet import permits in China led to some challenges at the start of the 2016/17 season. The delay was due to importers needing to meet a change in classification of the way velvet could be imported into China. The challenges occurred at the start of the season (November 2016) and were efficiently resolved by Chinese and New Zealand officials.
- Despite the early-season challenges, velvet exports continued to show strong growth. Exports of New Zealand velvet to China nearly doubled in value compared with the same period the previous year.
- Exports to Korea were below expectations for the 2016/17 season. Direct exports of processed velvet to Korea were predicted to increase due to the reducing tariffs achieved through the Korea–New Zealand Free Trade Agreement and the increasing consumption in the healthy food market. However, some buyers were reluctant to commit to velvet due to a misinterpretation of the Chinese import status and the perceived impact that may have had.
- All New Zealand deer farmers and Chinese velvet importers have been required to upgrade their velvet handling facilities to meet new government requirements.
 - New Zealand: MPI implemented a Regulated Control Scheme (RCS) for Velvet Harvest on 4 August 2017. The RCS specifies mandatory requirements for the removal, handling and storage of velvet to meet agreed food safety standards.
 - China: Velvet importers now must obtain a (TCM) pharmaceutical processor's or trader's licence. This requires a significant upgrade to existing processing facilities.
- In Korea, more food companies started to use New Zealand velvet in their healthy food products. The 2016/17 season also saw a significant increase in mass media advertising. New Zealand's closest partner in Korea – Korea Ginseng Corporation (KGC) – used a famous actor and created an advert that promotes the provenance of New Zealand velvet.

Figure 1: Velvet exports by destination and value (NZ\$ FOB) for year to 30 September 2013–2017

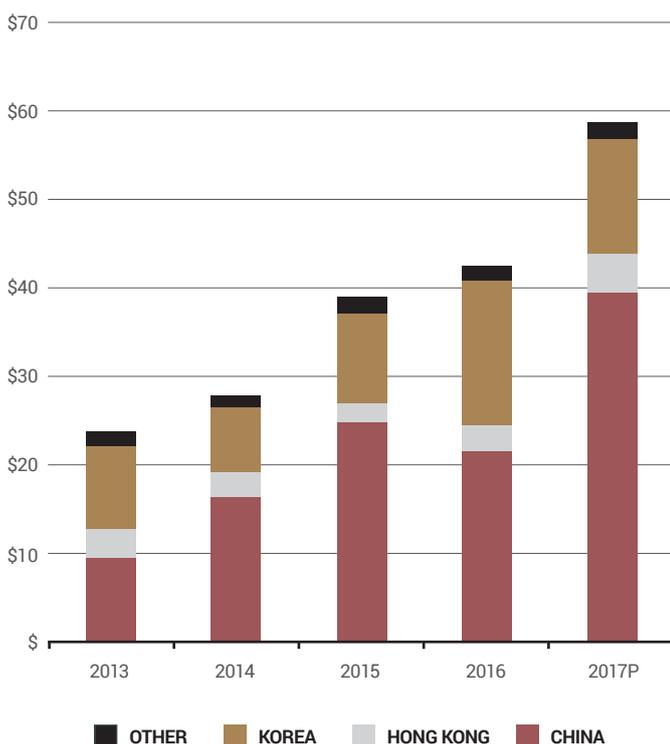


Figure 2: A KGC advertisement featuring actor Han Suk-kyu promoting its hero product, Cheongnuksam, which contains New Zealand deer velvet

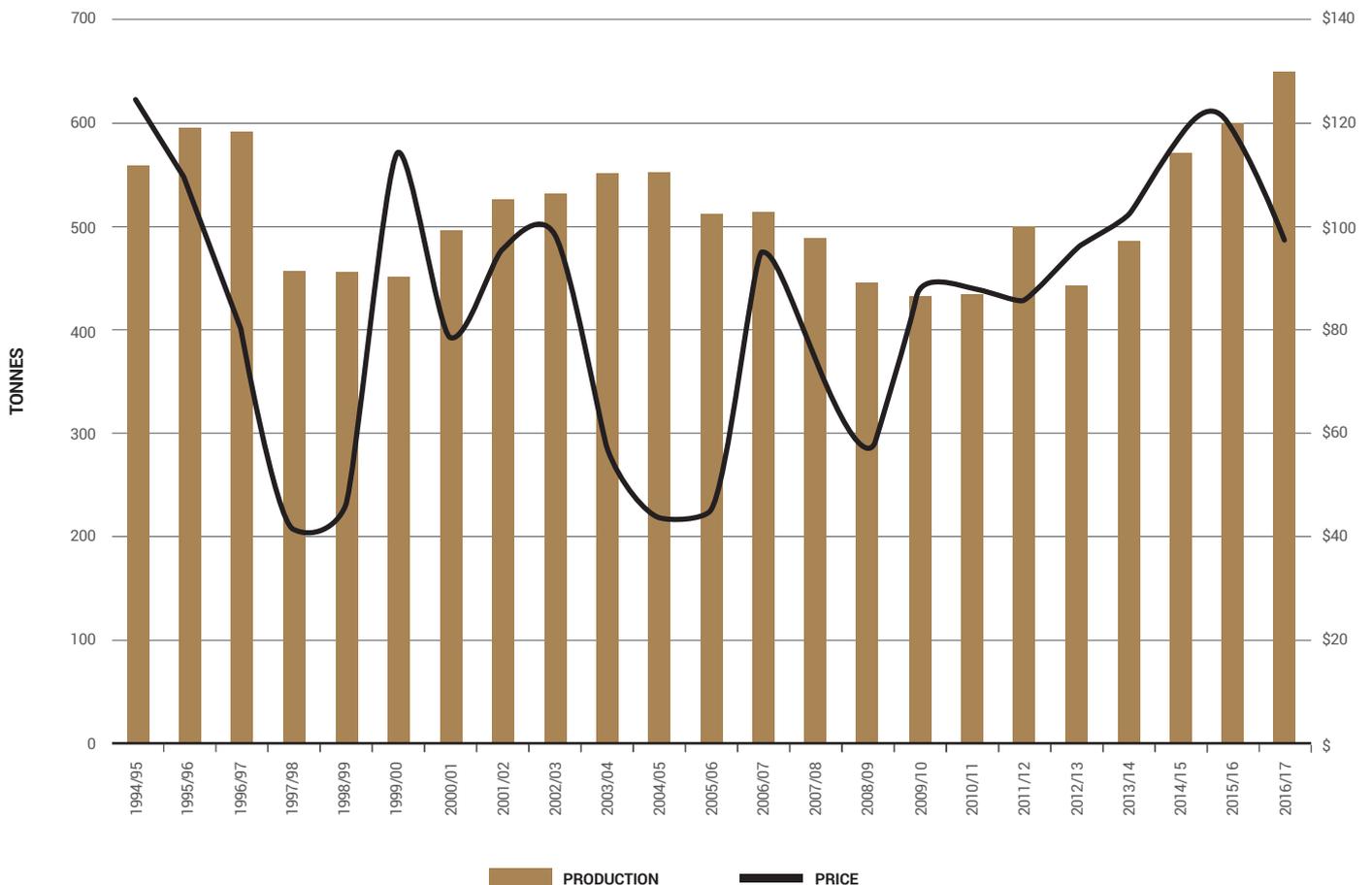


CHALLENGES AND ACHIEVEMENTS

- The weighted average velvet price paid to producers fell by more than what had initially been expected by exporters to just under \$100/kg (gross). This was due to the uncertain implications that arose through the delayed issuing of Chinese velvet import permits. The reduction in price ended a seven-year run of firming prices.
- Based on levy collected, New Zealand velvet production increased by 10 percent from 603 tonnes to 662 tonnes.

The advertising of New Zealand velvet products by respected Korean companies increased to another level.

Figure 3: Farmgate price (per kg, black line) and production (tonnes, brown bars) for years ending 30 September 1995–2017



DEER CO-PRODUCTS STATISTICS

VALUE OF EXPORTS OF TAILS FOR YEAR ENDING SEPTEMBER 2013–2017

Market	2013	2014	2015	2016	2017P
China	\$1,621,162	\$527,840	\$2,554,178	\$5,137,666	\$4,703,108
Hong Kong	\$7,497,752	\$10,765,124	\$8,039,374	\$4,248,456	\$5,771,444
Total	\$9,118,914	\$11,292,964	\$10,593,552	\$9,386,122	\$10,474,552

VALUE OF EXPORTS OF SINEWS AND TENDONS FOR YEAR ENDING SEPTEMBER 2013–2017

Market	2013	2014	2015	2016	2017P
China	\$340,492	\$557,382	\$1,454,244	\$1,400,455	\$1,663,848
Hong Kong	\$880,470	\$2,825,127	\$1,623,705	\$104,444	\$405,951
Other	\$534,848	\$798,542	\$750,344	\$193,388	\$202,290
Total	\$1,755,810	\$4,181,051	\$3,828,293	\$1,698,287	\$2,272,089

VALUE OF EXPORTS OF PIZZLES FOR YEAR ENDING SEPTEMBER 2013–2017

Market	2013	2014	2015	2016	2017P
China	\$664,002	\$206,642	\$2,880,558	\$7,073,666	\$4,210,076
Hong Kong	\$3,842,302	\$6,643,394	\$5,576,468	\$2,320,888	\$4,760,146
Other	\$168,152	\$159,954	\$163,312	\$9,280	\$195,412
Total	\$4,674,456	\$7,009,990	\$8,620,338	\$9,403,834	\$9,165,634



PASSION2PROFIT PROGRAMME

STRATEGIC OBJECTIVES

- Create a vehicle for collaborative market development
- Increase non-seasonal venison sales
- Increase sales to new markets
- Increase average carcass weight by 4kg
- Increase fawn survival by 5%
- Increase industry revenue by \$56 million per annum

PROGRESS TO DATE

- Five venison marketing companies agreeing on strategic market development projects.
- Companies investing in Cervena™ promotions in Europe.
- Market research and trials in China confirm the need for a long-term approach; no easy wins to date.
- 2014 average: 55kg
2017 average: 57kg
- 2014*: 72%
2016*: 72%
- 2014 NZ exports: NZ\$226m
2017 NZ exports: NZ\$207m

CHALLENGES AND ACHIEVEMENTS

- The second full year of the Passion2Profit (P2P) programme recorded continued growth in sales of venison to new markets and growth in the number of farmers participating in industry activities.
- Improvements in market conditions helped maintain enthusiasm for investing in productivity improvements.
- Strong demand for New Zealand venison in traditional markets and the dip in supply made commitments to new market development difficult to fulfil in some instances.
- **Main highlights for the year included:**
 - Year 3 of the Benelux Cervena Trial, with four companies promoting Cervena venison as a summer option.
 - Two companies working with importers in Germany to develop the market for Cervena as a summer option.
 - Agreement on a refreshed approach to using Cervena in new and emerging markets.
 - Incorporation of deer farming standards into individual company and industry-wide quality assurance programmes.
 - More than 250 farmers involved in Advance Parties.
 - Eighteen Regional Workshops exploring new ways to improve farm performance.
 - Eighty rural professionals taking part in deer farming training workshops.
 - Increased use of the online and print farm decision tools.

Dutch chef, Simon Feitsma, first winner of the Hanos Cervena MasterChef competition.



MARKETING PREMIUM VENISON: \$8.2 MILLION OVER 7 YEARS

PROJECT	WORK COMPLETED IN 2016/17
1. Confirming market requirements: \$1m over years one and two	Five venison marketing companies directed research into new venison markets. Mountain River Venison led market development activities in mainland China, confirming potential for venison in the western restaurant sector.
2. Collaborative marketing – trialling and establishing distribution: \$5.1m over 7 years	Alliance Group, Duncan NZ, First light and Silver Fern Farms worked with importers and distributors in Belgium and The Netherlands to promote Cervena venison between March and August 2017. Silver Fern Farms trialled Cervena as a summer item in Germany in 2017. Venison marketing companies' importing and distributing partners were pleased with the impact of the promotion and committed to continuing in 2018.
3. Developing and applying industry standards: \$1.6m over 7 years	Quality assurance standards for deer farming and for quality venison were agreed by industry working groups. Deer farming standards were incorporated into the red meat sector's farm assurance programme alongside sheep and beef. The new audit regime was introduced on 1 July 2017 and will be compulsory for the supply of Cervena. All five marketing companies now implement quality assurance based on the DeerQA standard, or equivalent.

MARKET-LED PRODUCTION: \$7.8 MILLION OVER 7 YEARS

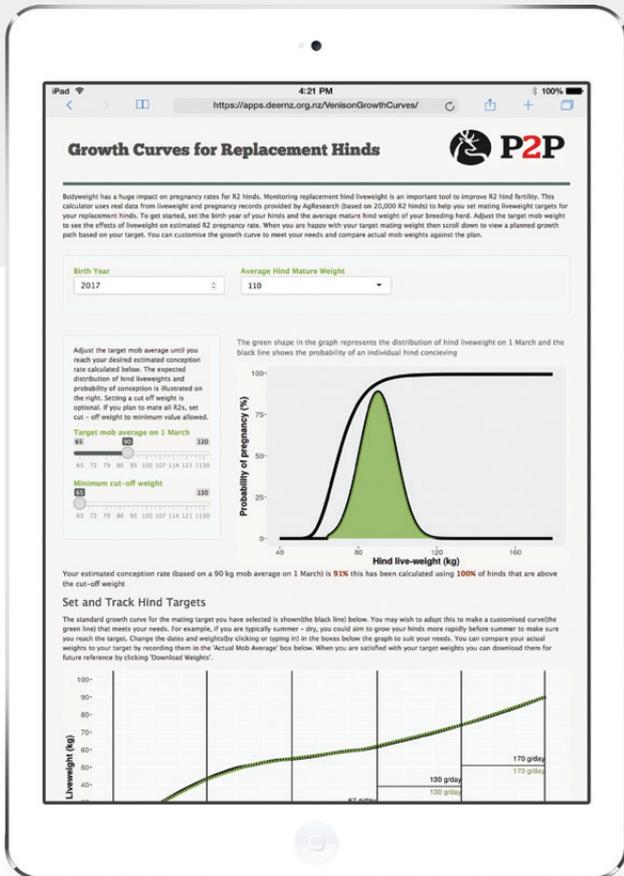
PROJECT	WORK IN 2016/17
4. Project management and governance: \$0.8m over 7 years	Surveys of Advance Party participants indicated strong endorsement of this approach to practice change.
5. Accelerating industry change through the development and deployment of new farmer engagement strategies such as Advance Parties: \$4.1m over 7 years	<p>By the end of 2017, 25 Advance Parties were operating with nearly 250 deer farming properties engaged.</p> <p>Fifteen Regional Workshops were held to encourage uptake of information from Advance Parties among a wider deer farming audience.</p> <p>Eighty people registered for workshops for rural professionals.</p> <p>Six future leaders enjoyed The Big Deer Tour, learning about the deer industry.</p> <p>Eight Deer Fact sheets were produced and distributed to all known deer farms and associated industry advisers.</p>

Regional Workshop at Northbank Station, Canterbury.



PROJECT

- 6. Packaging of the best information on genetics, feeding and deer health technology to create on-farm solutions: \$2.9m over 7 years.



This online calculator for replacement hind growth curves is available on the DINZ website.

PROJECT 3

Increase the number of farms recorded as compliant with national on-farm quality assurance programmes. Aim to have national adoption of the QA standards by year 7 across all venison processing companies.

PROJECT 4

The programme is well managed in accordance with the contracted obligations of the Primary Growth Partnership. A review of the programme will be undertaken in 2018.

PROJECT 5

Continue to support Advance Parties, more knowledgeable agricultural service providers and the provision of productivity information to individual producers to help them identify opportunities for improved profit. Introduce the Deer Farm Systems Description, which will allow assessment of deer farming options based on intensity of breeding and finishing systems.

PROJECT 6

Package deer health, feeding and genetics information in ways that can allow farmers to apply it easily. Examples of this will include guides for feeding deer to hit optimum slaughter dates, deer health reviews to reduce the cost of health issues and increasing the use of breeding values.

WORK IN 2016/17

Growth curves for venison and for replacement hinds were reproduced, trialled and distributed. It has been great to see these being used.

The hind growth calculator and wall chart were produced and used to calculate target hind weights.

The Deer Health Review workbook was produced and distributed to interested vets and farmers.

Videos on tips for weaning, body condition scoring and foetal aging were produced and posted on-line.

WHAT IS TO COME?

PROJECT 1

Identify other markets that can benefit from collaborative development. Work will continue in China in 2017/18 and companies will look to the healthy food market in the United States.

PROJECT 2

Continuation of the collaborative summer marketing programme in The Netherlands, Belgium and Germany in 2018. The aim is to have new markets able to demand up to 2,500 tonnes (CWE) of venison by year 7.

POLICY

DINZ's statutory function includes promoting and assisting in the development of the deer industry. We do this by:

- advocating on the deer industry's behalf on policy development and implementation at a national and regional level.
- having a stake in bodies such as OSPRI that are integral to the deer industry's operations.

In its environmental work, DINZ tries to ensure that new policies are practical and appropriate from a deer farming perspective.

ACHIEVEMENTS

- MPI will reconsider appropriate maximum residue limits for veterinary medicines in velvet, based on relevant science and risk analysis.
- DINZ continued to help NZDFA branches engaging with councils on regional plan change proposals that give effect to the National Policy Statement for Freshwater Management.
- DINZ co-funded two environmental good management practice (GMP) projects supported by the Sustainable Farming Fund.
- DINZ participated in national level working groups facilitated by central government on stock exclusion from water bodies, GMP and agricultural greenhouse gas emissions.
- Several environmental projects were initiated through P2P that will help farmers comply with regulatory requirements as well as maintain deer farming's position as a sustainable, responsible land use.

CHALLENGES

- The pastoral sector is reluctant to accept cost-sharing for post-border exotic disease readiness and response activities while having little input into pre-border and border defences. There is also a lack of clarity on industry's obligations. These factors have drawn out negotiations on foot-and-mouth disease arrangements.
- Progress on absorption of deer TB testing costs into the TBFree scheme and development of a risk-based TB testing regime has been slow.
- Important pastoral sector biosecurity and food safety policy initiatives, e.g. NAIT review and electronic ASD development through key agencies dealing with exotic pest incursions, has also been slow.
- Increasing public and government scrutiny of agriculture's environmental footprint will require the deer industry to demonstrate good management practices.
- A desire for simple regulatory solutions to variable and complex (deer) farming systems, coupled with minimal public awareness of deer farming and deer behaviour, creates misdirected planning rules and regulations. This constrains deer farmers' ability to manage environmental impacts while maintaining profitability.



Environmental resources for farmers developed by DINZ under the Passion2Profit programme.

These initiatives include the development of an Environmental Code of Practice, the publication of environmental management Fact Sheets and the establishment of environment-focused Advance Parties.

SCIENCE

VARNZ and DEEResearch both sought to improve the impacts of their research, DEEResearch by seeking greater input from research users into project commissioning and VARNZ by aligning its science strategy with DINZ strategic outcomes.

The main science highlight is the traction gained on improving animal health. This involves a combination of projects including drench development, breeding more robust deer, evaluating the role of CARLA and understanding the role of stress – and how to mitigate it – on health and production.

ACHIEVEMENTS

- Getting two research projects underway (one backed by a commercial company) into deer-specific multi-active oral drenches with a short withholding period.
- Committing to investment into genomic-based information platforms as the basis for future genetic selection – see Figure 1 for forecast benefits to the venison industry.
- Obtaining long-term AgResearch commitment to DEEResearch's Hitting Targets programme through its Strategic Science Investment Fund.

CHALLENGES

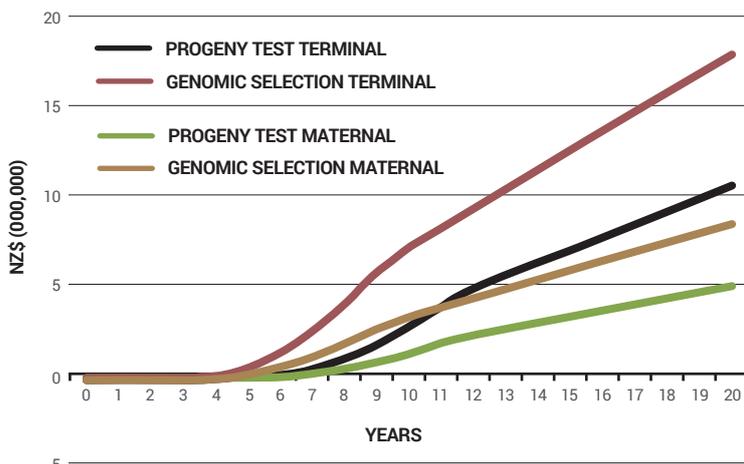
- Engaging with stakeholders to identify key areas where research can remove a constraint or add value to their system.
- Being able to consistently transfer research outputs to on-farm uptake is still a work in progress, although use of the Advance Party network and co-innovation processes will help.
- Making the smartest investments into environmental research with a limited budget.

THE FUTURE

DINZ will look to optimise its science investments though investing less in science administration (maintaining both VARNZ and DEEResearch is costly) and more in research itself. It will also seek further improvements to the research commissioning and monitoring systems to ensure that its investments stand the best chance of achieving impacts.

DINZ will also seek to derive greater benefits from research on velvet functionality by encouraging more detailed follow-up research and product development by commercial partners who market sophisticated, high-value products based on proven health claims.

Figure 1: Prediction of the contribution of using genomic-based selection tools (red and brown lines) to deer industry profitability as opposed to use of current phenotype-recording systems (black and green lines) (courtesy of AgResearch)



Swab being taken as part of CARLA research work.

DEER SELECT

Deer Select's role is to provide genetic tools to assist deer breeders and commercial producers in the improvement of traits that are economically important to sustainable deer production.

Main challenge: Farmer uptake of better genetics

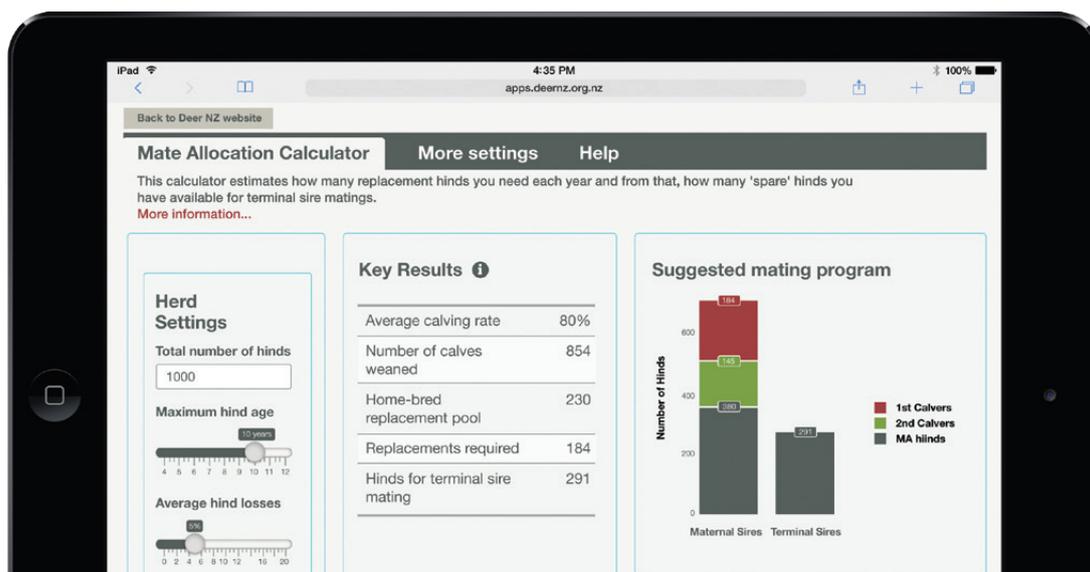
Sires of various degrees of merit for a range of traits – growth, meat and earlier conceiving – are available to suit any production system.

The quantity and quality of data recording on Deer Select is greater than ever and the depth of pedigree and performance data means breeding values and indexes are increasingly robust, so that purchasers can buy with confidence. The investment by DEERResearch in genetics underpins the continued development of Deer Select.

ACHIEVEMENTS

- Agreement for date of birth recording to become compulsory for across-herd published values from the 2017 birth year onwards, after breeders had voluntarily provided predicted birth dates for 75 percent of all 2016-born weaners. Date of birth information enhances the accuracy of breeding values as the effect of birth date can be removed from the assessment of genetic merit for growth, particularly weaning weight.
- After breeders who supplied sires to the Deer Progeny Test (DPT) continued to eye muscle scan young stags, gains in this trait are now being made. Eye muscle area is favourably associated with increased primal cuts and improved tenderness.
- Genetic connectedness has been maintained satisfactorily post DPT following co-operation between breeders in sharing genetics. As a result, Deer Select can accurately correct for between-herd environment effects.
- Parentage and breed testing is now being done by the new and more accurate DNA technology, genome by sequencing (GBS). GBS brings the possibility of using DNA information for estimating genetic merit for some traits rather than relying on phenotype recording, although establishing this system will require well-recorded (phenotyped) animals for calibration purposes.
- Breeder and producer knowledge and interest in genetics, to support uptake of Deer Select, has been maintained by provision of expert input on the topic at the Next Generation conference, Advance Party meetings and regional workshops.
- A hind mate allocation app to support farmers in their breeding decisions (Figure 1) is now available online through the Deer Hub at <https://deernz.org/deer-hub/tools/mate-allocation-calculator>

Figure 1: Hind mate allocation calculator. Terminal sires can be any sire (high growth red, hybrid, wapiti or elk) that replacement hinds are not retained from. The choice depends on what suits the hind base, management and property or farmer preference.



CHALLENGES

- The updated meat module has been technically challenging.
- Like the commercial sector, there is a degree of generational turnover in breeding herds that record on Deer Select. In some cases, the herds are ceasing to record and the genetics are dispersed to industry.
- Getting the (very welcome) new herds that have joined Deer Select up to speed in terms of recording requirements is also challenging. Some are stud herds (particularly Wapiti herds) and some are commercial velvet herds.
- Encouraging commercial deer farmers to use genetics to improve productivity and profitability, particularly for venison production, be it through heavier weaners, earlier-born weaners or faster-growing/heavier venison animals remains the biggest challenge.

THE FUTURE

We want to safeguard the future reproductive performance of hinds by Deer Select developing new reproduction-related breeding values. A new challenge for Deer Select breeders will therefore be recording more maternal trait information, particularly relating to young hinds.

The meat module is to be updated with improved parameters from the DPT.

Integration of CARLA (indicates an immune response to internal parasites) research breeding values into Deer Select will take place if it is proven that these heritable and variable responses confer value to deer, e.g. through better timing or more growth.

Regional Workshop at Clayton Station, South Canterbury.



PRODUCER ENGAGEMENT

Producer Management supports the goals of the DINZ strategy based on a cohesive and respected industry that is profitable and confident.

Activities include:

- Expanded deer farmer engagement and exposure of P2P programme Advance Parties through annual Regional Workshops aimed at the wider community.
- Further development of the Next Generation programme (introductory and higher levels), including the annual conference and communication network.
- Programme managing the annual New Zealand Deer Industry Conference.
- Promoting the Regional Workshop programme to DFA branches and supporting other local DFA branch activity.
- Strengthening DINZ engagement with the service sector and key individuals.
- Promoting external awareness of, and confidence within, the industry.
- Continuing to engage in environmental awareness, advocacy and support, especially through development of formal Farm Environment Plans through DINZ support and co-operation with the NZDFA at national and branch level.
- Strengthening activities relating to benchmarking, target setting, performance monitoring and analysis, and reporting financial returns.

CHALLENGES AND ACHIEVEMENTS

- The annual Deer Industry Conference in its modern format was hosted by DINZ in Wellington and attracted strong support from deer farmers, service industries and processor/exporters.
- The conference featured "The Business of Deer Farming". High profile speakers included a government Minister and marketing experts. The conference also held a business breakfast for Wellington-based agribusiness leaders. The first steps in developing a partners' programme will be expanded and refined in 2018.
- The biennial environmental awards attracted five contrasting and outstanding entries which will be profiled in *Deer Industry News* with regional field days over the next 18 months.
- The industry continues to enjoy firming returns for both venison and velvet antler, supported by continued productivity improvements and an increasing number of larger well-integrated multispecies farms incorporating deer.
- Producers, particularly from the Next Generation programme and the DFA branch leadership, have shown increasing interest and participation in Advance Parties and the P2P programme as the vision for better productivity begins to be realised.
- Industry communications continue to advance with the regular monthly production of a DINZ E-Zine, monthly upmarket *Stagline-online* for DFA members and continual improvements to the Deer Hub at www.deernz.org/deerhub.
- The DFA's Next Generation programme is strongly supported by DINZ both financially and through executive input. This year's theme was family farming succession and career advancement and attracted 50 attendees, adding depth to the momentum being generated in this area.
- Deer farmers are particularly pleased to have the professional assistance of DINZ environmental policy manager Lindsay Fung to help them in advocate for fair and equitable environmental regulations for deer farmers. Major projects are now completed with Environment Southland. Environmental regulation in Waikato and Canterbury now presents the biggest challenges.

CONTINUED

- Deer farmers have been encouraged to complete a Land or Farm Environment Plan (LEP or FEP) as a first step to responsible engagement and basic compliance. Beef + Lamb NZ has been strongly supportive in this.
- Annual Regional Workshops link local farming communities, DFA branches and Advance Parties. The workshops are open to all deer farmers and aim to improve understanding of Advance Party projects and the lessons from them. They are done via a facilitated workshop with one or two selected topics, and are proving popular and successful.
- A new entry level (Level 3) qualification for new deer farmers and current staff has been developed by *Deer Industry News* editor Phil Stewart, and Motivate Group's Clive Jermy and Tony Pearse. The Livestock Husbandry (Deer) resource covers breeding, raising young stock and health and welfare. Courses will be formally offered in 2018. The project was supported by a successful bid to MPI's Sustainable Farming Fund and produced for the Primary ITO with co-funding from DINZ and NZDFA. It is planned to build on this and produce a similar resource based around deer nutrition.



thanks to science.

Participants in the Next Generation programme, held at AgResearch's Invermay campus.



Regional workshop at Landcorp's Stuart Farm, Southland.

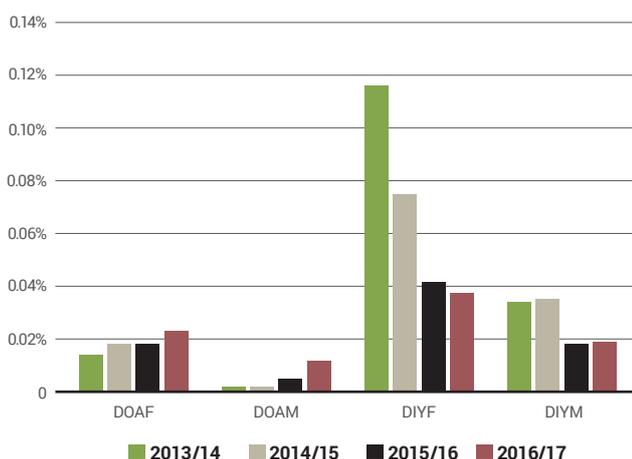


ANIMAL WELFARE AND DEERQA

CHALLENGES AND ACHIEVEMENTS: TRANSPORT

- Re-auditing of the DeerQA transport companies continues to progress. Transport companies carrying deer to processing plants are required to be accredited to the DeerQA Transport Accreditation Programme. Each transport company is audited once every three years.
- Currently 82 accredited transport companies are registered with DINZ.
- With constant pressures regarding animal welfare, transport operators carrying deer are eager to make sure they do things correctly and that their crates and systems meet the required standards.
- Demand for training courses for drivers transporting deer is ongoing and these courses are held regularly throughout the country. All drivers are required to be certified to the DeerQA Transport Programme.
- Livestock drivers, in particular, must be aware that deer are totally different animals to transport compared with species such as sheep and cattle. Therefore it is essential that those transporting deer possess the skills needed to avert potential animal welfare problems, from loading, right through the journey, to unloading.
- It is important also that drivers are able to judge whether an animal is fit to transport, recognising aspects such as body condition scores, injuries, aggression and velvet antler requirements.
- From a health and safety perspective, it is important that drivers are skilled in the proper handling and care of the deer they are transporting.
- Farmers who have any doubts about whether deer are fit for transport should seek advice from their veterinarian and obtain a Fitness for Transport Declaration.
- Livestock drivers are skilled and aware of the requirements for the transport of unfit stock and may refuse to load and transport animals regarded as unfit. They have a legal obligation to leave those animals behind at the point of loading.
- The Ministry for Primary Industries Verification Service (MPI VS) continues to monitor all consignments of deer at venison processing plants as part of the joint surveillance programme with DINZ and the National Velveting Standards Body (NVSB) (Figures 1 and 2).
- The DINZ/DeerQA Transport Programme is always looking for continual improvement in deer transport. Statistics show year-on-year improvements, but three areas still raise concerns: cull hinds, weaned deer and the transport of pregnant hinds.

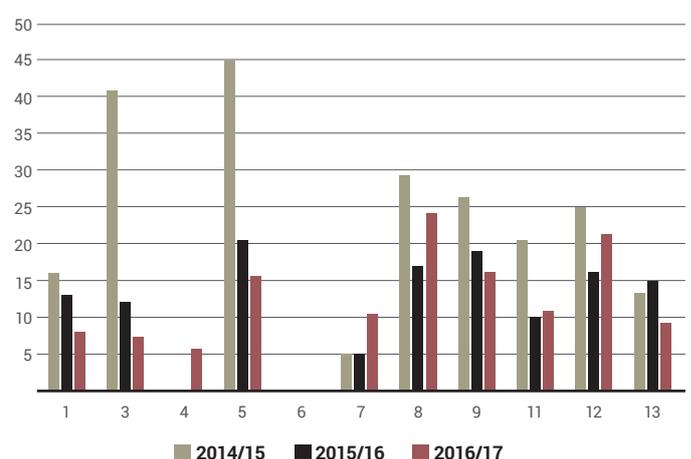
Figure 1: Deer mortality in transit to or in lairage at processing plants 2016/17 (%)



DEAD ON ARRIVAL (DOA); DEAD IN YARDS (DIY); MALE (M); FEMALE (F).

Source: MPI VS

Figure 2: Total annual deaths (hinds and stags, dead on arrival and dead in yards) by premises 2014/15 – 2016/17



Source: MPI VS



CHALLENGES AND ACHIEVEMENTS: VELVET QUALITY SYSTEMS

Background

- Before the beginning of the 2016/17 season, velvet auditors were directed to concentrate on the hygiene of facilities where velvet was being removed.
- It had become a growing concern for the NVSB after fielding complaints from velvet buyers and exporters about the state of some products they were handling.
- Auditors were advised to request improved facilities in deer sheds where they saw fit.
- During audits, any previous minor non-compliances were to be treated as major non-compliances in the hope that this would initiate change.
- Having non-compliances within the facilities did not amount to a “failed audit” as far as the actual removal process was concerned.
- It was agreed that this was an educational process and farmer/velvetters would be given a lead-in time to complete any changes.
- At the completion of the 2016/17 velvet audits, 61% of sheds audited required corrective actions.
- Most of those involved were positive and accepting of the findings, and could see logic in what was being pursued.

Audits

- During the 2016/17 velvet season, 105 audits were conducted, representing 10.5% of eligible velvetters (Table 1, Table 2).
- Audits were conducted across all three methods of removal: chemical, local and mechanical block.
- Due to the changes focusing on shed improvements, the number of major non-compliances showed a marked increase on previous audit years. Some 61% of sheds required alterations.
- Other non-compliances included:
 - incorrect position of the nick test
 - kneeling or bending down in front of a sedated stag, creating a health and safety risk to the operator
 - needle caps held in the operator’s mouth
 - ERPs not displayed or filled out.
- One velvetter was injured when kicked by a stag during an audit. The audit had to be abandoned.

Table 1: Summary of audits carried out 2016/17

Accredited for mechanical block only	14
Accredited for local only	17
Accredited for chemical restraint which includes local	40
Carried out where velvetters used combinations of the above to velvet their deer	34
Total audits	105

Table 2: KPIs 2016/2017

Velvet season	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17
Audits completed	8.2%	11%	9.46%	10.85%	10.58%	10.5%
Stags settled	96.5%	99.2%	100%	95%	100%	98%
Analgesia at first test	91.6%	100%	95.6%	99.5%	100%	96.2%
Compliant facilities	97.4%	96.6%	94.4%	95.8%	98.4%	80.3%
Number of forms filled correctly	98%	97%	97%	98%	100%	100%
Appropriate level of sedation	99%	95.1%	97.1%	97.1%	100%	98.1%
Tourniquet before local anaesthetic	99%	99.1%	99%	100%	100%	100%

Surveillance programme

- The surveillance programme continued throughout the 2016/17 velvet season gathering data on consignments of deer presented for processing. This programme works in conjunction with the NVSB and MPI VS. Monthly velvetting data for the 2016/17 season collected by deer slaughter premises (DSP) veterinarians are collated by MPI VS and DINZ personnel. The monthly spreadsheets are then forwarded to MPI for follow-up of individual suppliers where required.
- In total, 462 suppliers across both the North and South Islands were collated onto spreadsheets from September 2016 through until the end of January 2017. Of these, 96 suppliers and 30 veterinary practices were contacted by MPI to confirm:
 - (a) the supplier in question is a client of the practice, and
 - (b) that the velvetting services had been provided during the season.
- Four suppliers required follow-up for velvetting illegally.
- Many "compliance" issues relate to accredited NVSB individuals velvetting stags from different herds and whether they have dispensation to do so, or using "NaturO" rings when registered for chemical restraint or local, or vice versa. This is followed up and managed by DINZ.
- Deer farmers remain strongly aware of the requirements for velvetting and accept that the surveillance work undertaken jointly by DINZ–NVSB and MPI underpins the integrity of the programme. Most farmers spoken to fully supported the work.
- It was previously recommended that MPI VS manages calibration across all staff in venison processing plants. To this end, DINZ executives have joined MPI VS in running awareness and calibration sessions with active MPI VS personnel in all New Zealand venison processing plants.



SUMMARY FINANCIAL STATEMENTS

SUMMARY STATEMENT OF COMPREHENSIVE REVENUE AND EXPENDITURE

FOR THE YEAR ENDED 30 SEPTEMBER 2017

	Consolidated 2017 \$000	Consolidated 2016 \$000
Revenue income		
Venison levy income	2,824	2,476
Velvet levy income	1,819	1,658
Tbfree levy income	1,162	1,186
NAIT levy and DEERPRO voluntary contribution	325	311
Grant income	949	798
Other revenue	467	469
Total revenue	7,546	6,898
Expenditure		
Research expenditure	1,022	1,158
Venison and velvet promotion expenditure	1,538	1,954
P2P expenditure	1,906	1,870
Tbfree and NAIT expenditure	1,253	1,403
Other expenditure	2,120	1,835
Total expenditure	7,839	8,220
Movement in investment in associate	-	(49)
Total comprehensive revenue and expenditure before taxation	(293)	(1,371)
Taxation expense	-	-
Total comprehensive revenue and expenditure after taxation	(293)	(1,371)

SUMMARY STATEMENT OF FINANCIAL POSITION

AS AT 30 SEPTEMBER 2017

	Consolidated 2017 \$000	Consolidated 2016 \$000
Current assets		
Cash at bank	1,544	1,085
Investments	2,002	2,470
Accounts receivable	625	658
	4,171	4,213
Non current assets		
Property, plant & equipment	23	32
Intangible assets	-	-
Investments in subsidiaries and associates	12	12
	35	44
Total assets	4,206	4,257
Current liabilities		
Accounts payable and accruals	1,445	1,223
Employee entitlements	105	111
	1,550	1,334
Non-current liabilities		
Accrued lease liabilities	28	2
Total liabilities	1,578	1,336
Net Assets	2,628	2,921

SUMMARY STATEMENT OF CHANGES IN EQUITY

FOR THE YEAR ENDED 30 SEPTEMBER 2017

	Consolidated 2017 \$000	Consolidated 2016 \$000
Opening equity	2,921	4,292
Total comprehensive revenue and expenditure after taxation	(293)	(1,371)
Closing equity	2,628	2,921

SUMMARY STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED 30 SEPTEMBER 2017

	Consolidated 2017 \$000	Consolidated 2016 \$000
Net cashflows from operating activities	(5)	(1,368)
Net cashflows from investing activities	464	1,542
Net increase in cash held	459	174

NOTES TO SUMMARY FINANCIAL STATEMENTS

The specific disclosures included in this summary financial report have been extracted from the full financial report which was authorised for issue on 28 November 2017.

The full financial statements have been prepared in accordance with Public Benefit Entity Accountancy Standards. The full financial statements have been audited and an unmodified audit opinion has been issued. These summary financial statements comply with PBE FRS 43. Figures are in New Zealand dollars, which is the Deer Industry New Zealand Consolidated Group's presentation currency. All summary financial information has been rounded to the nearest thousand.

The summary financial report cannot be expected to provide as complete an understanding as provided by the full financial report of the Group.

If you require a set of accounts, please contact Rob Aloe on email – rob.aloe@deernz.org – and we will forward a copy to you.

Deloitte.

INDEPENDENT AUDITOR'S REPORT

To the readers of the Deer Industry New Zealand group's Summary Financial Statements for the year ended 30 September 2017

The Auditor-General is the auditor of the Deer Industry New Zealand Group. The Auditor-General has appointed me, Trevor Deed, using the staff and resources of Deloitte Limited, to carry out the audit of the summary financial statements of the Deer Industry New Zealand Group, on his behalf.

The accompanying summary financial statements of Deer Industry New Zealand Group on pages 22 to 23, which comprise the summary statement of financial position as at 30 September 2017, and the summary statement of comprehensive revenue and expenditure, summary statement of changes in equity and summary statement of cash flows for the year then ended, and related notes, are derived from the audited financial statements of the Deer Industry New Zealand Group for the year ended 30 September 2017. We expressed an unmodified audit opinion on those financial statements in our report dated 28 November 2017.

The summary financial statements do not contain all the disclosures required for full financial statements under Public Benefit Entity Accounting Standards Reduced Disclosure Regime. Reading the summary financial statements, therefore, is not a substitute for reading the audited financial statements of the Deer Industry New Zealand and Group.

Directors' Responsibility for the Summary Financial Statements

The Directors are responsible on behalf of the Deer Industry New Zealand Group for the preparation of a summary of the audited financial statements, in accordance with PBE FRS 43: *Summary Financial Statements*.

Auditor's Responsibility

Our responsibility is to express an opinion on the summary financial statements based on our procedures, which were conducted in accordance with International Standards on Auditing (New Zealand) (ISA (NZ)) 810: *Engagements to Report on Summary Financial Statements*.

Other than in our capacity as auditor and the provision of taxation advice, we have no relationship with or interests in Deer Industry New Zealand Group. These services have not impaired our independence as auditor of the Group.

Opinion

In our opinion, the summary financial statements derived from the audited financial statements of the Deer Industry New Zealand for the year ended 30 September 2017 are consistent, in all material respects, with those financial statements, in accordance with PBE FRS 43: *Summary Financial Statements*.



Trevor Deed, Deloitte Limited

On behalf of the Auditor-General
Wellington, New Zealand

BOARD MEMBERS

APPOINTED BY THE NEW ZEALAND DEER FARMERS' ASSOCIATION



Clive Jermy, ONZM
(Until 30 June 2017)

Chairman of Deer Industry New Zealand Research Trust
Director of Deer and Game Services Ltd



Kris Orange
(From 1 July 2017)

Director and Shareholder of Downlands Deer Ltd, Great Southern Deer Farms Ltd, Waime Holdings Ltd
Shareholder of Silver Fern Farms Ltd and Ravensdown.



Andrew Macfarlane
(Until 30 June 2017)

Director of ANZCO Foods, AgResearch Ltd, Edgewater Resort Hotel Ltd, Ngai Tahu Farming Ltd and The Kowhai Ltd
Shareholder of Windwhistle Pastoral Ltd and Macfarlane Rural Business Ltd
Councillor, Lincoln University



Mark Harris
(From 1 July 2017)

Director of Apps on Farm Ltd and Agersens Ltd (Australia)
Shareholder of Fonterra, Farmlands and Ballance
Officer of Gallagher Group Ltd



William Oliver

Trustee of Oliver Whalan Trust
Director of Waerenga Holdings Ltd and Three Rivers Ag Ltd
Associate Director of Silver Fern Farms Cooperative Board
Shareholder of Silver Fern Farms Ltd and Provelco



Dr Ian Walker

Owner of Kilgaren Farm Partnership
Director of Centralines Ltd, DEEResearch Ltd and Rangitoto Radio
Director and Shareholder of Marama Farming Company
Shareholder of Silver Fern Farms, Ballance, Ravensdown, Farmlands and Provelco

ELECTED BY VENISON MARKETERS AND PROCESSORS



Danny Hailes

Officer of Alliance Group Limited
Director of DEEResearch Ltd



Glenn Tyrrell

Officer of Duncan New Zealand Ltd.
Shareholder of Duncan New Zealand Ltd



Dean Hamilton

Officer of Silver Fern Farms Ltd.
Director of Armadale Partners Limited,
Hamilton & Co Ltd

ELECTED BY VELVET MARKETERS AND PROCESSORS



Colin Stevenson
(Until 30 June 2017)

CK Import Export Ltd



Tony Cochrane
(From 1 July 2017)

Officer PGG Wrightson Ltd
Director and Shareholder of Green Antler Ltd

INDEMNIFICATION AND INSURANCE OF OFFICERS AND DIRECTORS

Deer Industry New Zealand indemnifies all directors named in this report, and current executive directors of the Group against all liabilities (other than to Deer Industry New Zealand or members of the Group) which arise out of the performance of their normal duties as director or executive officer, unless the liability relates to conduct involving lack of good faith and dereliction of health and safety duties. To manage this risk, the Group has directors' and officers' insurance.