

Deer Industry News

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Full conference report



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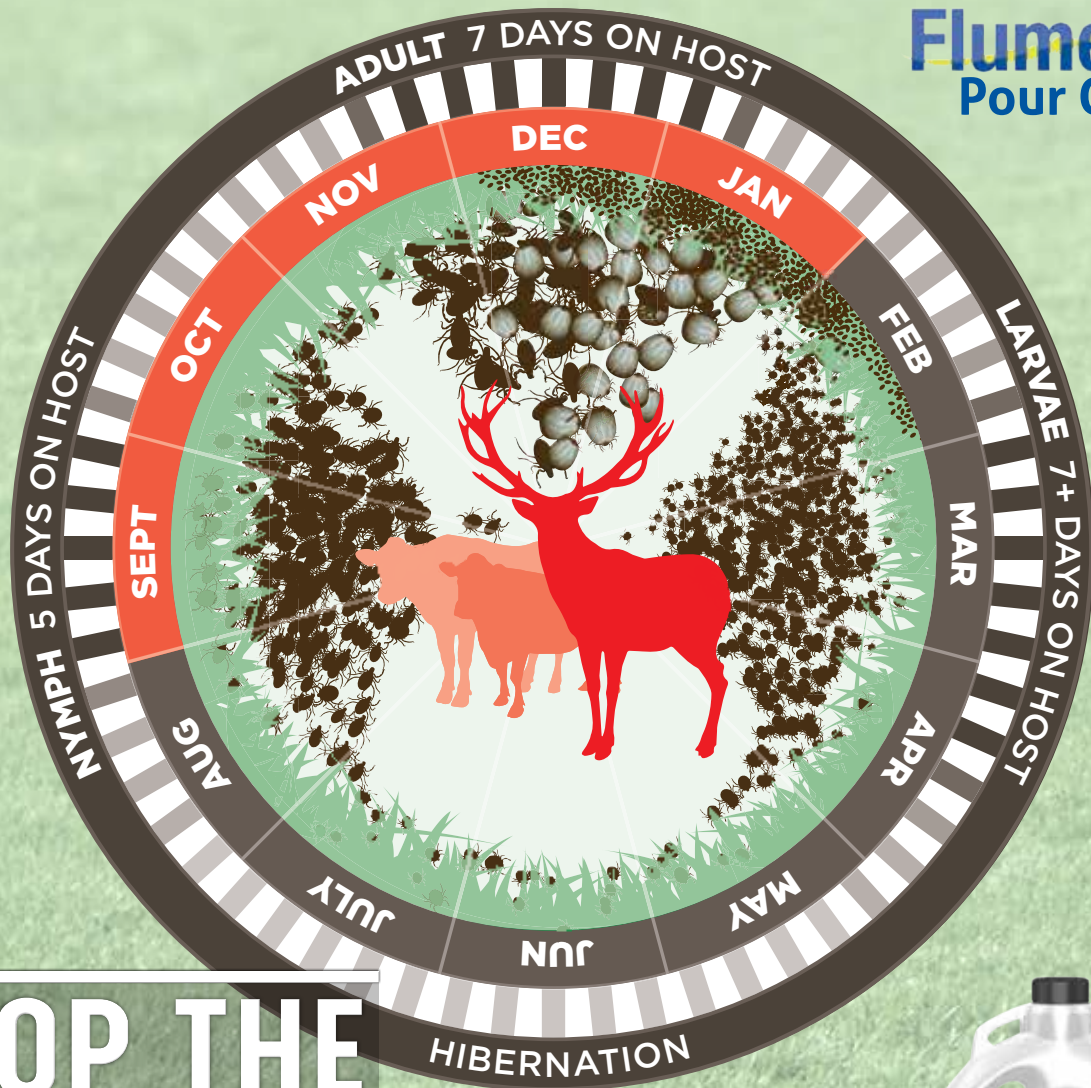
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*Diagram is approximate and for illustrative purposes only. 1. Risks relate to regional incidence and movements. ACVM No. A011279.

Deer Industry News

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Cover: Mesopotamia Station's Malcolm Prouting ferries a load of field day visitors back to base after a quick scenic flight during the post-conference field day in the Rangitata Valley, organised by the South Canterbury/ North Otago branch of NZDFA. See p32.
 Photo: Phil Stewart

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Share your stories

At the recent deer industry conference in Timaru, DINZ Chair Dr Ian Walker and David Morgan, outgoing Chair of the NZDFA Executive Committee, announced an aim of getting every deer farmer to have a Farm Environment Plan (FEP or Land Environment Plan) by the end of 2020.



Janet Gregory.

DUE TO NEW rules and water plans, many farmers in different regions require one, so there is an added urgency and interest. The key is preparing a plan that states what you are doing now, helps you identify work priorities, includes a budget and reasonable timeframes and outlines your mitigation options – rather than a tick box exercise that sits on a shelf!

The Deer Industry Environmental Management Code of Practice (EMCoP) was launched at the conference and this has been compiled to help farmers develop their own FEP by identifying the Good Management Practices (GMPs) for different topics, listing considerations to take into account and then providing a series of mitigation options depending on your farm situation. It brings together information from the 2012 Deer Farmers' Landcare Manual and the industry-agreed Matrix for Good Management Practices produced in 2016. Some of the topics are universal across cattle, sheep and deer, while others recognise the particular behavioural needs of deer. New topics include sections on biosecurity and carbon.

This EMCoP has been developed over the past year with input from deer farmers, DINZ and regional council staff and edited by Edmund Noonan and myself. It was designed by Abby Davidson from NZ Landcare Trust and funded through the Passion2Profit programme.

Many farmers have contacted me recently saying they need a plan but don't know where to start, so part of the next stage will be identifying steps to get people under way. How long it takes to develop your plan often depends on the scale and complexity of your operation, but we find preparing it in stages is beneficial. Talking to other farmers through workshops or your Advance Parties is also useful. Feel free to make contact if you have questions (janet.gregory@landcare.org.nz).

Over the next couple of months we will plan events to help farmers utilise the EMCoP to prepare their farm plans and identify other tools that may be required. We want to develop an online, interactive document that is easy to use. We will be working closely with Beef+Lamb NZ staff, who are also reviewing their farm environment templates, and with regional council staff, to make sure what we develop also fits their requirements. We would love to hear your ideas.

During the past 10 years I have worked closely with the sector, I have seen a big shift in the way deer farmers are documenting and improving practices that affect soil and water quality. At the same time, they have been improving their productivity and promotion of highly valued velvet and venison products, while processors continue to value and use the story behind New Zealand's grass-fed, natural production.

As land managers, share your stories and be proud of what you are doing to look after the land and water we value so highly. The New Zealand public needs to hear this, not just our international markets. We also need proof that what you are doing on farm is making a difference, so document your work and share with others in your communities and catchments. Working together brings results. ■

– Janet Gregory, Regional Coordinator, NZ Landcare Trust

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EDITOR Phil Stewart, Words & Pictures

Keeping up our winning streak

by Phil Stewart, *Deer Industry News* Editor

The theme for this year's conference – Staying ahead of the game – struck all the right chords with an enthusiastic audience of well over 200 conference attendees as they were welcomed to the Caroline Bay Centre, Timaru, for one of the most positive industry gatherings in years.

DINZ CHAIR IAN Walker set the scene, noting the theme acknowledges that the industry is “in a good spot – but we need to keep working hard to maintain our advantage. We should be happy but never satisfied”.

Continuing with the rugby metaphors enjoyed by his predecessor, Walker said “it's been a great team effort”. He added that well-worn rugby expressions also applied to the deer industry right now when it came to avoiding complacency – “we'll enjoy the celebration tonight, but tomorrow we'll focus on next week's game”.

Walker praised the DINZ executive and staff for their work, but also complimented the farmers, processors and marketing companies for doing the “hard yards”. He said the industry had enjoyed a great year, but like any good team there were still plenty of “work-ons” and bigger challenges ahead.

DINZ CEO Dan Coup took his audience through more detail in a “state of the nation” presentation.

He said venison prices had surged ahead of other proteins. Farmers used to call for a \$2 margin over lamb – now it is \$4.

Achievements on farm such as a lift in fawn survival and an improvement in average carcass weights of about 2kg must be credited to deer farmers, while the hard work being done in developing markets should also be acknowledged, he said.

Velvet had experienced a temporary price dip the previous (2016/17) season but was now back on track in line with the steady improvement of the past 10 years. “People have worked hard for that – it didn't happen by accident.”

Coup said industry venison production had eased from a “steady state” of about 400,000 animals per year, down to around 300,000/year for the past couple of seasons.

He said it was time to review the industry's performance in light of its strategy for “a confident and growing deer industry”. Four platforms support this strategy.

1. Premium positioning of our products

Under the P2P programme, sales of Cervena® into the summer chilled market in Europe, the United States and China had doubled from 50 tonnes in 2016 to 100 tonnes in 2017. Coup said that with targets for this premium venison segment stretching out to 1,200 tonnes by 2022, there was plenty still to do.

Velvet is also targeting premium branded segments. Consumer giant LG now carried a New Zealand Deer Velvet brand on its premium products, hopefully a sign of things to come. Coup said



Ian Walker: Greater focus on environment and biosecurity issues.

that while it was great to have about 25 percent of New Zealand's velvet now being used in value-added healthy foods, that still left 75 percent being traded as a relatively undifferentiated commodity and that was far too much.

2. Market development and diversification

This has been going well. The Eurozone share of our venison exports has fallen from about two-thirds to just over half in the past four years, while the United States has steadily grown to become our biggest single market. Coup welcomed the trend. “Being so heavily reliant on the Euro zone has not been a happy place for us to trade. We would like to see that share drop to about 40 percent and Asia lifting to about 10 percent for venison.”

Likewise with velvet: the share and overall tonnage of velvet going to Korean traditional medicine has been steadily falling (now well below 50 percent), in favour of Korean healthy foods and China. Coup said too much velvet is still going into the commodity trade, however.

3. Sustainably growing on-farm value

Coup said the CINTA report (see page 7) indicated that 90 percent of people involved in the P2P Advance Party programme for more than a year have made changes to increase on-farm value, while 70 percent of all farmers say they have become more productive in the past five years – a good sign things are headed the right way.

continued on page 5

Passion2Profit: Applying experience

by Phil Stewart, *Deer Industry News* Editor

A real-world angle on P2P experience at farm level helped lift the lid on the programme's practical benefits, while some essential big-picture perspectives revealed more about the evolution of the deer industry as a whole. The big picture first.

Our own system

Dairy does it, so why can't we? No reason as it turns out. MRB's **Jamie Gordon** showed how deer farming systems are developing into well-defined types, the same way the dairy industry has its own five-level farm systems model.

He's been working on the P2P Deer Farm System Project, which is designed to help farmers take a step back and analyse where their operation fits in to the big picture. Gordon was at pains to point out that this is a conceptual model, not a farm management tool like Farmax.

It's nonetheless an essential step if you're to start down that productivity road, from:

- where am I now?
to
- where do I want to be?
followed by
- how shall I get there?

The Deer Farm System Project will help you better understand that first step – where am I now?

The concept extends the thinking behind the P2P growth curve



Jamie Gordon: Road tested model compared well with real-life farm situations.

continued on page 6

Winning streak: continued

4. A cohesive and respected industry

This is a "soft" objective, Coup said, but it's nonetheless important. "We want people to be proud of being in the industry. About 25 percent of active farmers are in the Advance Party programme – we want more!"

Summing up, Coup said the CINTA report had underlined the industry's confidence. He said more precise industry statistics would be helpful so that growth in herd numbers could be more accurately monitored. "The last agricultural census showed no deer at all in Taranaki or Nelson!"

There has been some growth in herd numbers, but a lot of that is made up by velvet stags. "We need more hinds," he said.

Overall, the industry's performance rated about a B or B+, Coup said. "We have our work-ons. Remember, our next game is against the Sharks, not the Sunwolves!"

Looking ahead

Ian Walker completed the introduction with comment on the board's review of the DINZ strategy. He said they looked into the big picture and external forces that could buffet the industry. These included the change of government, the rise of synthetic

meats, social media, trade wars, *Mycoplasma bovis*, the risk of chronic wasting disease and other challenges.

The board concluded that not much needed to change, but the strategy was tweaked to increase the focus on the third part of the platform: sustainably growing on-farm value. This would mean more attention and resource being devoted to environment and biosecurity issues, encompassing water quality, the emissions trading scheme, waste management, soil protection, biodiversity, NAIT and so on.

He said it was also important for the industry to keep telling its unique premium story.

Achieving this has been a balancing act for DINZ. Commitment to the P2P programme – now about half completed – needs to be maintained so momentum isn't lost. More resources are also needed to invest in environmental stewardship. This may require an increase in the venison levy for 2018/19.

Walker said the drop in venison volumes in recent seasons meant a drop in levy income for DINZ and reserves are gradually declining as planned. He congratulated the DINZ team for managing well within a tight budget, noting that a restructuring of DeerPRO next year will provide modest savings. ■

Passion2Profit: continued

models (posters and online) for finishing and replacements that are now gaining traction amongst finishers and those breeding replacements.

It initially covers venison finishing systems – breeding is to follow but is of course closely linked. It creates a simple matrix, with a main driver of productivity on each axis: intensity of breeding (frame size and breed type) and intensity of feeding and finishing (Figure 1). For simplicity and to better match actual outcomes, the two more intensive breeding systems (large-framed red hinds with high BV red stags, and moderate-framed red hinds with a terminal sire) are treated as equivalent.

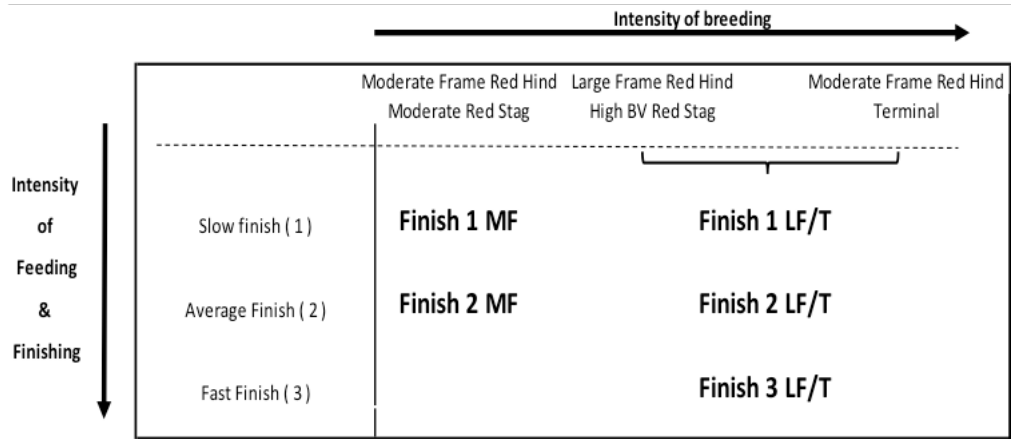
This working model picks apart the intensity and costs for each of the three feeding/finishing systems: slow (1), average (2) and fast (3). Gordon said the three systems range from grass only on a 10-year pasture replacement cycle to a 5-year cycle involving fodder beet (1 year), clover/herbs (2 years) and a short rotation ryegrass (2 years).

As expected, the fast finishing system (3) involves higher inputs and higher feed costs than the other systems (Figure 2) but generates significantly more tucker.

While costs are higher for finishing system (3), Gordon said the productivity is also much higher. For example, the relative margin per hectare (about \$2,300) is about double that for finishing system (1) (about \$1,100), irrespective of breed type or frame size.

In terms of carcass weight per hectare, finishing system (3) – high BV reds or terminal sires over red hinds – was producing more than quadruple the amount of carcass weight as the slow finishing system (1) using moderate-framed reds.

Figure 1: Systems overview.

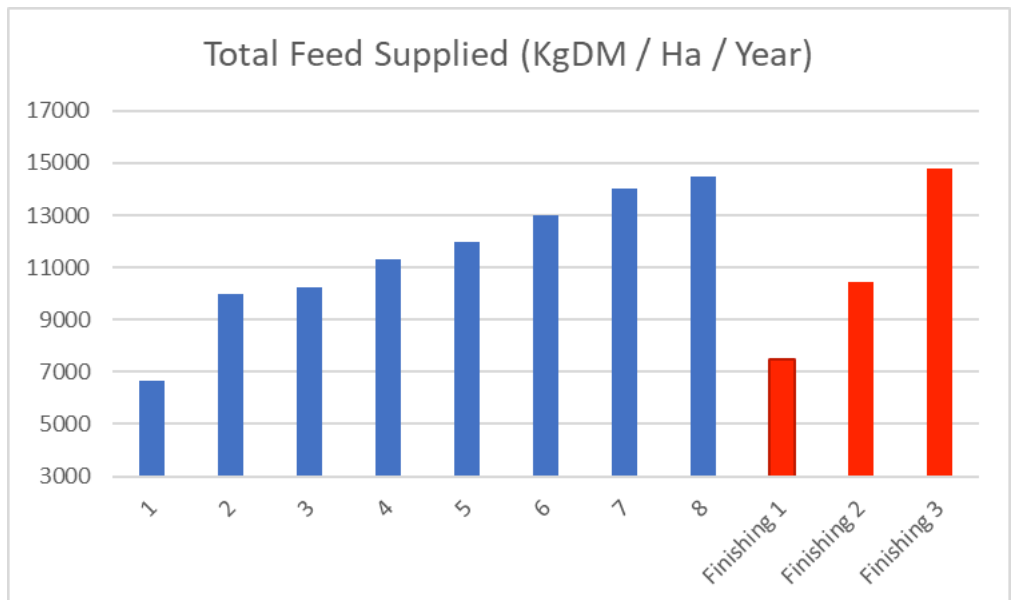


MF = Moderate frame Red X Moderate Frame Red
 LF = Large Frame Red X High BV Red Stag
 T = Moderate Frame Red X Wapiti or European Terminal Stag

Figure 2: Feed inputs and costs for the three finishing systems.

	Finishing 1	Finishing 2	Finishing 3
Cropping Pasture Renewal Period (Years)	10	7	5
Feeds Used	Pasture	SR Grass Kale Pasture	Fodder Beet Clover/Herb Pasture
Total Feed Supplied (KgDM / Ha / Year)	7500	10429	14800
Super Phosphate on Pasture (Kg/year)	208	278	361
Urea on Pasture (Kg per Year)	65	130	196
Silage per head (KgDM/year)	40	45	45
Imported Feed per Head (KgDM per year)			
Feed Cost (c/KgDM)	3.13	5.64	7.28
Average Feed ME	10	10.5	11.5
Feed Utilisation	80%	85%	85%

Figure 3: Amount of feed supplied per hectare on eight road-tested farms (blue bars) compared with feed supplied in Deer Farm System model (red bars).



The fast finishing system (3) also achieved higher growth rates per day and got animals to slaughter weights in about two-thirds of the time achieved in the slow finishing system (1).

So far, so good and so theoretical. Does this spreadsheet model apply in the real world? Gordon was pleased to report that indeed it does.

He “road tested” eight systems on seven farms (one farm ran two systems) to test the model. Three farms were in Hawke’s Bay and five were spread throughout Canterbury. By and large the actual farm data fitted within the range of the Deer Farm System model very well in terms of feed supplied (see Figure 3) and feed costs per kg of dry matter. Actual margins per hectare also mirrored the model very well.

Gordon said farm input costs for feed were a bit lower than the model would suggest on a couple of the more productive farms. “This was because they did much of the crop work themselves and they also had higher than average crop yields,” he explained.

Deer Industry New Zealand is currently working on a farmer-friendly version of the Deer Farm System model so that it can be easily applied at farm level as a good start point for farm business planning and spotting opportunities for increasing productivity.

Jamie Gordon’s presentation including detailed graphs can be viewed on: <https://youtu.be/6-AhNmftCpg>

CINTA report: big changes from 2011 to 2017

P2P Manager **Innes Moffat** held up a mirror to the deer industry, reporting the results of the 2017 review commissioned from CINTA Market Research. Following on from a similar survey in 2011, it exposed interesting trends in the deer industry – confirming what we’ve suspected in many cases but also springing the odd surprise.

Nearly 600 deer farmers took part in a telephone interview for the survey. Such a large sample (more than one-third of the industry) means the results are very robust.

Moffat shared the highlights as follows. Stick with us – there are some interesting numbers in here.

Herds are growing

- Average velvetting stag herd size has grown by 60 percent to 264 since 2011.
- Breeding hind herd sizes grew by 23 percent to 407.
- Finishing herds grew by 64 percent to 360 stags.
- Gross farm income is up 23 percent to \$482,000 on average.
- 22 percent of farms surveyed have a velvet focus, nearly quadruple the proportion in 2011 (6 percent).

Membership

- 84 percent of those surveyed were NZDFA members, very close



Replacements at Mendip Hills: Average breeding hind herd size grew by 23 percent over 7 years.

to the national coverage estimated by the Association.

- 16 percent were members of Advance Parties.

Productivity

- 70 percent said their farms have become more productive in the past five years.

Breeder practices

- 65 percent are using feed supplements in the leadup to mating (up 9 percent).
- 49 percent are using breeding values for stag selection (in 2011, 36 percent used BVs for ‘on farm’ selection).
- 59 percent say they use body condition scoring (not measured in 2011).
- Fewer breeders are monitoring mature hind liveweights (down 10 percent to 39 percent).

Finisher practices

- 68 percent now use forage crops for their finishers (not measured in 2011).
- 55 percent regularly weigh weaners to monitor growth rates (not measured in 2011).

Velvetter practices

- 74 percent record individual animal performance (55 percent in 2011).
- 71 percent used supplements before casting (up from 48 percent) and 48 percent use supplements during velvet growth (up from 35 percent).
- Fewer farmers are now using a vet for velvetting (down to 22 percent from 34 percent).

Environmental management

This was a new survey section so we don’t know how practices or attitudes are changing. However, the 2017 baseline figures indicate that we have work to do. For example:

- 36 percent have fenced off waterways and done riparian planting.
- 31 percent have no formal environmental plan.
- 16 percent say their farm has no impact on the environment.
- 6 percent have completed a Level 1 Land and Environment Plan.

Animal health planning

An impressive 72 percent said they have an animal health plan for deer, and about three-quarters of those had involved their vet.

Digging deeper, however, there is still plenty to work on. Only one-third of farmers surveyed have a plan that is actually written down, reviewed annually and risk assessed. (This is provided for in the P2P Deer Health Review – the template is available online at deernz.org.nz/annual-health-review).

Motivations for significant changes

Increasing productivity and profitability remain the most important motivators for change (more so for South Island farmers), while the desire to improve efficiencies is of growing importance.

Animal welfare and environment have declined in importance as motivators for change, while a small but growing number of farmers cite compliance with rules as a driver. CINTA found that non-DFA members were more motivated by animal welfare considerations than DFA members.

Sources of knowledge

Deer industry publications [presumably, ahem, including this

continued on page 8

Passion2Profit: continued

one? Ed.] remain the most important source of knowledge for deer farmers, although that position has declined from 91 percent to 66 percent since 2011 as other information sources emerge.

Surprisingly perhaps, electronic industry newsletters declined in importance: 33 percent cited them in 2011, dropping to 24 percent in 2017.

Deer Facts weren't around in 2011, but their instant popularity was confirmed in the 2017 survey – 34 percent used them as a source of knowledge, and 42 percent rated them positively as “useful or effective”.

The Deer Hub on the DINZ website is also a relatively popular new entrant in the knowledge game (20 percent use it and 27 percent rate it positively as useful or effective).

People for knowledge

The old saying about farmers learning best from farmers was borne out again. In 2017 about 45 percent cited like-minded farmers, 33 percent valued industry field days and 18 percent liked the P2P regional workshops – a solid endorsement of this more recent initiative.

Depressingly for the rural professionals, only 12 percent valued farm consultants and 5 percent used their vet to keep up knowledge and skills.

Barriers to change

No barriers to change stood out significantly, but access to capital/money and information were the most commonly mentioned. Echoing the “farmers learning from farmers” theme, a growing number (now 12 percent) want assurance that something will work before they give it a try.

On the positive side, 16 percent of farmers said there were no barriers to change and they were happy with everything.

Influencers of change

The survey revealed something of a disconnect between *where* people get their knowledge (see above) and *who* actually influences them to change.

Vets can cheer up. While only 5 percent cited them as a source of knowledge, vets were cited as the biggest single influence on change (two-thirds said they had an influence). Field day trial results (44 percent), Advance Party members (44 percent) and other farmers (43 percent) were also significant influencers.

Growth plans increase

The 2017 survey showed a positive shift in confidence between 2011 and 2017. Some 34 percent intend to expand their deer operations (up from 25 percent) and 13 percent plan to downsize (21 percent in 2011). In each survey, about half of all farmers intended to keep herds the same size.

Among those planning to downsize, the biggest single reason (46 percent) was personal (age/health/retirement). Changing land use was a big factor for 25 percent.

Among those planning to expand their deer operation, the biggest single motivator was profit (34 percent), followed confidence in the deer industry (15 percent).

What does it all mean?

The report highlighted two distinct groups emerging:

- older farmers (50 plus) with smaller herds, often deer-only, more predominantly in the North Island, generally happy with the status quo and unmotivated to change
- younger farmers (under 50) with larger herds, usually mixed

species operations, higher incomes and strong motivation to expand and make improvements, more predominantly in the South Island.

The researchers concluded that farmers seeking change want evidence and proof of success. “They seek confidence in changes and professional sound advice from experience ... [they] cannot afford to waste time, effort and resources in strategies that prove to be ineffective or inefficient.”

Deer Health Review in action

Hayden Barker, a veterinarian with Vetlife's Pleasant Point clinic, and Tim Turner, operations manager at The Kowhais, near Fairlie, described the positive experience of working together on a Deer Health Review.

It was, they agreed, an initial two and a half hours very well spent.

The Kowhais is a large deer, beef and sheep enterprise on 800 hectares, running 850 breeding hinds and finishing 2,000 weaners (see separate article on page 45 for more). Turner said the farm goals are economic and environmental sustainability while maximising the kilograms of meat grown per hectare.

“The review was done to nut out where we can maximise animal health to make some gains.”

Barker said the Deer Health Review was available in paper or electronic form (with useful links to information on the Deer Hub). While the review took some preparation on Tim's part, it was well worth it.

Stock tallies, weaning weights and percentages, scanning results and so on were useful to have on hand, complemented by Barker's vet reports and information on previous animal health spending.

“Step one was to have some targets and data. The next step was to look at risk assessment and a management review table. We scaled risks from the various diseases from 1 to 10 and prioritised them. We then compared the risks from doing nothing against the current risks that are influenced by our management.

“Tim ranked internal parasites, yersinia and trace element issues for priority management. We looked at the cost benefit of what we were currently doing and what could be done, and came up with a management plan.

“Once we had done this we decided what we'd do. We set out actions, dates and responsibilities.”

Barker said a typical action was to weigh the R2 hinds at scanning in June and follow up with a late scan in September to see if fetal loss was an issue.

Turner said the review was well worth the time invested. “We had all the relevant data in various folders, but it was a good process to get everything down and show how the farm is doing in a simple way. In some areas I thought we'd been doing better, so it showed me where there was room for improvement.”

He said the review promotes further investigation into different issues like copper and drench practices. “Doing a KPI table highlights the opportunities very quickly.”

If other people in the district were dealing with the same issues, this sped up the process. “The more data you have the more accurate you can be.”

Barker concluded by saying the review was a personalised process that could be regularly updated. The initial work on

setting overall goals didn't need to be repeated with each update. "It took some time to do it the first time, but once you've done it you can keep referring to the document and updating it. The review is a foundation for your animal health plans.

"You only know what you measure. It's a base document for your farming operation," he said.



Tim Turner (left) and Hayden Barker: Review was well worth the effort.

Putting a value on good genetics

Deer Select Manager **Sharon McIntyre** and Canterbury deer farmer **Mike Salvesen** teamed up to talk about the real-world financial benefits of investing in good genetics.

McIntyre said farmers faced financial constraints when thinking about making a significant change, and also wanted good evidence that the change would yield an advantage (see article on page 7 on the CINTA report).

One such change is an investment in genetic improvement and she was only too happy to show this could yield impressive returns.

Using real data, McIntyre compared the progeny performance from ten sires on a Hawke's Bay farm. Their breeding value (BVs) for weight at 12 months ranged from +10kg to +28kg.

She showed that the performance of the progeny of the sires between weaning and at slaughter closely mirrored the BVs of the individual sires. The average slaughter weight of the +28kg BV male progeny was 17kg higher than the average for the +10kg sire – almost exactly matching the difference on paper. (The range for the females, measured in January, was 10kg.)

Translating this into dollar terms, McIntyre said the value difference of the progeny between the best and worst sires was \$185 per head (male and female progeny combined).

She showed that if all progeny went to slaughter, the best of the sires (+28kg for weight at 12 months) would yield an additional \$11,500 in extra carcass weight over four years (assuming he serviced 50 hinds at 87 percent weaning and a \$10 schedule). That margin would be more than enough to justify purchase of a high BV sire.

And keeping it real, McIntyre re-crunched the figures to show the financial benefit if 20 percent of the female progeny had



Mike Salvesen and Sharon McIntyre talked genetics.

been retained rather than slaughtered. This would still yield an additional \$9,000 of income over four years, with the added bonus of the high genetic merit for weight flowing into the replacement hinds. "So when you start mating those replacements you'll get an even better result," she said.

Deer Select is interested in working with farmers to carry out sire studies to show how this works in a commercial situation. She noted that the faster-growing progeny from higher BV parents need to be fed appropriately to take advantage of the good genetics.

Mike Salvesen has a science background and experience in arable farming as well as with many livestock classes from deer and cattle right through to poultry. He said genetic improvement in growth rates of about 1 percent per generation can be expected. Chickens, with a generation interval of just 25 weeks, can be genetically improved much faster than ruminants like deer and cattle, with their two-year interval.

Over the past 30 years, "exponential" genetic improvement meant chickens could now be grown to table weight almost twice as quickly as before. Deer, in contrast had improved growth rates by only 16 percent in three decades.

The important thing about proof of value with genetic merit was getting repeatable results. "With deer, that's what we are getting," Salvesen said.

On his own farm, Salvesen's +25kg sire (for weight at 12 months) was yielding progeny with a 75kg liveweight at 1 June and slaughter date of 25 October. Those from a +15kg BV sire weighed just 60kg at 1 June and took until 1 December to reach killable weights.

New BVs on the way for Deer Select

Sharon McIntyre said a BV for the **CARLA** gene (conferring resistance to internal parasites) should be available on Deer Select by the end of this year. Breeders now had three or four years of data to support this trait.

A **meat module** is also expected for Deer Select for next season and work is continuing on a **maternal module**, focusing on fertility of first and second calvers.

McIntyre said it is important to ensure genetic progress down one track, for example growth rate, isn't at the expense of other important traits such as these. ■

Science on stage

by Phil Stewart, *Deer Industry News* Editor

The deer industry leverages an impressive range of research activity, despite its modest resources compared with other livestock sectors. DINZ Science Policy Manager Catharine Sayer gave a brief overview of research currently under way.

VELVET RESEARCH IS carried out through VARNZ, a joint venture between AgResearch and the deer industry. Current work includes:

- Isotopic signatures in velvet to support product claims of New Zealand origin and prevent adulteration
- Velvet stem cell-mediated healing
- Healthy ageing by using velvet extract to stimulate micro-circulation in the brain (see more below)
- Post velvet harvesting analgesia
- Composition analysis (no work on this for the past 15 years)
- Wound healing/RepairRx and work by Vitaco (formerly Healtheries and Nutra-Life).

The other channel for deer industry research investment is DEEResearch. Sayer outlined the four main themes of research being funded through this vehicle:

- **Growing Deer:** The common thread for most of this work is genetics
- **Caring for Deer:** This covers animal health and the relationships between behaviour, stress and productivity
- **Caring for Customers:** A focus on product quality and safety, e.g. a current project looking at causes and prevention of deep muscle bruising (also related to Caring for Deer)
- **Caring for the Environment:** Major projects include water quality in high country deer systems (see below) and greenhouse gas (nitrous oxide and methane) mitigation.

Healing and growth mechanisms

Pleiotrophin (PTN) is, Dr Dawn Coates told the conference, a “lovely small molecule”. Coates and her research collaborators are looking into the function of PTN and its receptors, including the regulation of stem cells, as part of their research into the different proteins produced during antler healing. PTN, it turns out, is present in great quantities in healing antler – moreso than in any other research model. PTN plays a role in controlling growth of the pedicle periosteum (bone covering), which contains the stem cells to grow a new antler each year.

The researchers’ other centre of interest is the extraordinary and unique regeneration phase that occurs straight after antlers are cast or cut and the immune reaction in the centre of the wound during the first few days. “The centre region of the growing antler is very busy and is full of inflammatory cells. But after about 3 days these inflammatory cells have disappeared. Antler can not only grow fast but control the inflammatory response really well,” Coates said.

Associate Professor Coates is a former AgResearch Invermay researcher, now with the University of Otago Dental School and looking into healing and growth mechanisms in stem cell-driven



Dr Dawn Coates (left) with Catharine Sayer, DINZ.

regeneration of deer antler. She is working alongside PhD student Zhen Dong, Senior Research Fellow Dr Trudy Milne, Dr Stephen Haines of AgResearch and former AgResearch scientist Dr Chunyi Li, now back in China as Executive Director State Key Lab for Molecular Biology of Special Economic Animals, Changchun City.

Coates said stem cells are the “future of medicine” and the team has been investigating differences between the various proteins in nascent deer antler during its rapid period of growth.

They want to see how the proteins regulate stem cells and guide their development into various specialised cell types including bone, muscle, fat and cartilage. PTN has been singled out as a particularly interesting protein, Coates explained, because of its multiple functions. It is angiogenic (promotes development of blood vessels – essential for healing) and it controls inflammation. PTN also plays a part in the differentiation and renewal of stem cells, another important factor in healing.

Coates said the researchers were also exploring the role of receptors that regulate cell growth in antler. One of these, RPTPz, is a “very exciting” receptor, which PTN binds to. RPTPz stops negative feedback on growth, a bit like a car no longer having any brakes. “When RPTPz is turned on, cell growth really takes off,” she said. “This could be one way antler can grow at 2 centimetres a day.”

An important objective of this work is to develop new and specialised velvet extracts enriched for proteins such as PTN. “We don’t think that would be particularly difficult to do. Stem cell work holds exciting promise for human medicine and velvet antler has a role to play in this,” she concluded.

(For more on this work see *Deer Industry News*, February/March 2018, page 22.)

Monitoring impacts of deer on water quality in high country

If policies are going to be made affecting the way deer are farmed, then we should make sure it is based on good science, not just long-distance perceptions. That's one of the motivations for a research programme monitoring impacts of deer on water quality in five high country environments in New Zealand.

Geoff Asher, leader of the deer research group at AgResearch Invermay, updated the conference on progress with this work.



Geoff Asher: Real impacts of deer will be monitored over time.

He said that apart from ensuring policy makers are well informed, the work will also monitor real impacts of deer and other stock classes over time, while identifying point sources of damage or contamination and providing a foundation for ways to mitigate environmental impacts.

So far, five properties in five catchments are involved, representing a good range of high country environments: Shabor and Waerenga in the Waikato/King Country region, Haldon Station (Mackenzie Basin), Criffel Station (Wanaka) and Mararoa (Te Anau Basin). Asher said the farms are monitored twice a year at 10–15 sites, looking at sediments, nitrites/nitrates, phosphorus and *E. coli*. Records on weather and presence of stock will overlay the water quality data.

Point sources of contamination will be a particular focus for the work, looking at wallows, crossings, stream banks and stock camps. Asher said damage is being graded on a scale of 1 (pristine – very rare on livestock farms) to 5 (heavy erosive damage). “There will always be some impact from livestock,” he said.

The monitoring so far has thrown up at least one interesting head-scratcher for the researchers. At Criffel Station, *E. coli* readings above a schist gorge were very low as expected, but extremely high just below the gorge. There was no obvious source for this but it is quite possible that the culprits have feathers. It's still to be investigated through typing the *E. coli*, but it may well be due to the presence of a colony of pigeons that roost in the gorge. The point is, however, when it comes to water quality, things

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Science: continued

aren't always what they seem. This is where the science becomes important.

Asher said five further catchments will be added to the study this year (it continues until 2022). Four farms to take part have been identified so far, in Hawke's Bay, West Coast, Mackenzie Basin and Southland. It's also hoped to find a farm to monitor in North Canterbury or Marlborough.

Parasites

When it comes to parasites in deer, science has got a bit of catching up to do. AgResearch Invermay Research Associate Jamie Ward said drenches had been used as a blunt instrument to keep deer growing well in the face of parasite challenge since the industry began, but that strategy was running out of puff.

He outlined the four main areas of parasite research now underway, to help the deer industry with sustainable means of controlling internal parasites.

1. CARLA

Some deer produce an antibody ("CARLA") in their saliva in response to the protective sheath around infective parasite larvae and helps reduce infection in the gut. There is a modest but positive relationship between growth rates and CARLA levels in deer and Ward said the trait is moderately heritable. He said more "high CARLA" progeny are being born from sires with high breeding values for the trait.

Ward said it is important that selection for CARLA isn't at the expense of other beneficial traits and it appears that for growth rates at least, CARLA has a positive impact. Ward said this evidence is strong enough to justify bringing a breeding value for CARLA into Deer Select and he will be recommending this to the Deer Select reference group.

2. Mini-bolus

Work on a mini-bolus to deliver an efficacious controlled-release, low-dose "dry" anthelmintic is continuing. This follows an initial trial last year in which the albendazole/abamectin mini-bolus achieved efficacy rates of 94.3 and 95.4 percent, compared with rates of 98.7–98.8 percent for oral administration of the same anthelmintics in traditional liquid form at efficacious dose rates.

Ward said the mini-bolus has been reformulated to increase the albendazole dose and a new trial is about to commence also targeting lungworm and liver fluke, potentially giving a broader label claim for the mini-bolus.

A go/no-go decision on progressing the mini-bolus is expected in July. The decision will be partly influenced by the outcome of another project to get registration for a deer-specific triple-active drench (see below).

3. Lifecycle research

Ward updated the conference on the parasite lifecycle work being carried out by postdoctoral researcher Alex Chambers working with AgResearch's Dave Leathwick. He said Dr Chambers is a "great asset" to the programme. She is looking at the basic biology, lifecycles and infectivity of deer parasites at different times of the year. (For a more detailed report on this work see *Deer Industry News*, April/May 2018, page 16.)

4. A triple-active, deer-specific drench

A liquid oral drench formulated for deer and with a short withholding period would provide venison finishers with much



Jamie Ward: Deer farmer options for a triple-action drench are limited at present.

more flexibility when it comes to keeping a lid on worm burdens during the final weeks and months before slaughter.

Work to develop and register such a product is being led by Dave Lawrence working with Connemara Wapiti in Te Anau using wapiti crossbred weaners and Pania Flint, working with red weaners in Manawatu.

Ward said using a triple-active combination is best practice but options for deer farmers are limited. Apart from the mandatory 90-day withholding period using products not registered for deer, there is the issue of having to mix separate drenches or use a combination of oral and injectable drench – messy and time consuming.

DINZ is working with New Zealand animal health company Nexan to develop the product. The Connemara pilot trial last year with two different oral triple formulations yielded a good efficacy rate against gastrointestinal parasites of 98 percent (+ or – 2%). Deer in the Te Anau trial were slaughtered 14 days after treatment and residue results (to inform the withholding period) are pending.

The trial is being repeated in Manawatu, using one of the formulations from last year. The red weaners treated will be monitored for toxicity and behaviour and slaughtered 14 days post treatment. Efficacy will again be assessed by abomasal worm counting.

Ward said that if the residue test results from the 2017 trial are favourable, the residue testing won't need to be repeated for the 2018 Manawatu trial. If they are unfavourable, an additional group of animals will be slaughtered at 21 days to assess if a 21-day withholding period can be set.

"If the results this year are good, Nexan and DINZ will progress to registration and distribution of a deer-specific drench."

He said the mini-bolus being developed by AgResearch could be progressed as an alternative if the triple-active drench doesn't work out, although this could well get picked up commercially even if the drench does go ahead.

The Deer Industry Parasite Group (see *Deer Industry News*, January/February 2018, page 23) is advising DINZ and DEEResearch on the two deer anthelmintic projects. ■

Tb eradication: Onto the long home straight

by Phil Stewart, *Deer Industry News* Editor

The final phase for total biological eradication of Tb from New Zealand has begun, but pace yourself – it's going to take four decades to mop up the last of it.

THAT WAS ONE of the messages from OSPRI National Disease Manager, Dr Kevin Crews, at the deer industry conference in Timaru last month.

He recalled the progress that has already been made against bovine TB in New Zealand, from a peak of more than 1,700 infected herds in 1994 to less than 40 today. After first stabilising the spread of TB around the turn of the millennium, the next phase (2002–2011) saw the achievement of official disease freedom. That was followed by the proof of concept for biological eradication (2012–2015).

The final phase runs from 2016 to 2055. Crews said the progress made against TB to date could give hope in the battle against other disease challenges, such as *Mycoplasma bovis*. “Even an ‘impossible’ situation can be tackled with good science and cooperation.”

He said this last phase is broken down into several milestones: TB freedom in cattle and deer (no infected herds) by 2026, TB freedom in possums by 2040 and biological eradication from New Zealand by 2055. The last 15 years were to be used “mopping up” of potential pockets of TB infection in long-lived wildlife.

The total size of Vector Risk Areas was aimed to be reduced from 8.2 million hectares at 2016 (just under one-third of New Zealand's land area) to zero by 2040.

Crews said funding for 2016–2020 is projected to be \$250 million over that four year period, divided 60:40 between industry and government. (Industry's four-year contribution of \$150m is split between dairy, 43%, beef, 14%, deer, 2%, and an export levy, 0.7%.)

A new surveillance paradigm will walk a fine line between enough testing sensitivity to reliably locate TB, while still reducing the intensity of testing on-farm. “Once Tb gets down to a certain level it will go from a herd issue to an individual animal issue,” Crews said, and a greater reliance will be placed on TB surveillance at slaughter. The frequency of risk-based testing would use three main criteria: location (and its wildlife risk), herd history and animal movements. NAIT, currently under review, has a key role in each of these areas.

The annual number of TB tests has declined from over 700,000 in 2005 to about 170,000 in 2017. This should be able to be reduced to less than 100,000 by 2025, Crews said.

He had news on the procurement of TB testing services. “We are moving from a user-pays model to one invested in and managed nationally by TBfree New Zealand.” Deer testing was put out to competitive tender last November and from 14 May will be delivered free of charge to farmers through two organisations: AsureQuality and Veterinary Enterprises (VetEnt).



Kevin Crews: OSPRI will be playing a more active role in management and disposal of reactors.

Crews said OSPRI will be playing a more active role in management and disposal of reactors, including on-farm slaughter and post-mortem.

“Compensation for reactors will be available for deer. Valuations are to be determined independently and there is a disputes process available in the case of valuable stud animals,” he said.

He reminded farmers that OSPRI is obliged to provide testers with a safe work environment and noted that if any other husbandry work was planned while deer were yarded for testing, the tester should be advised beforehand.

Crews also advised farmers to confirm with the provider that clipping before the TB test is part of the service. “That's especially important if the company that does your test is changing.”

On the current review of NAIT, Crews said 38 recommendations have been made, covering areas such as performance and uptake of the system. They came under five theme areas:

1. Individually identifiable locations
2. Individually identifiable animals
3. Roles and responsibilities of programme users
4. Integrity of information recorded in NAIT
5. How NAIT is used for traceability.

He encouraged all farmers to read the review report, which can be accessed online at: <https://bit.ly/2HuQheH>

“Some of the recommendations could be implemented under the existing NAIT Act. Otherwise the Government will announce a timeline for recommendations that require legislative change.”

He said the review had engaged a technical user group, including deer industry representatives, some of whom were at this conference. ■

RCS: Upping our game

by Phil Stewart, *Deer Industry News* Editor

“Why didn’t we do this years ago?” That’s been a common reaction from farmers reflecting on the changes they’ve made in their deer sheds to comply with the Regulated Control Scheme (RCS) implemented by the Ministry for Primary Industries (MPI) on 7 August last year.

SPEAKING AT THE deer industry conference, DINZ Quality Manager John Tacon explained how the scheme came together through good cooperation between DINZ, NZDFA and MPI. He said separate audits from Chinese authorities and MPI had triggered the process to give more direct government oversight of standards for harvesting, storage, handling and transport of velvet antler.

He acknowledged the pragmatic approach of MPI, which had given the industry some breathing space to meet RCS standards. “They gave us a soft landing,” he said.

The NZDFA had played an important role, getting a total of 700 farmers along to shed meetings to discuss the new standards. Tacon said acceptance wasn’t universal. “I got the occasional abusive call.”

However the great majority did accept the need to up our game around velvet hygiene. “Compared with the venison industry, this is all still entry level stuff – we’re fortunate in that regard.”

Standards had to be met within one year, not three as some had hoped. Most people embraced the changes and did them well, Tacon said. “Some have rebuilt sheds at great cost. Others have altered their existing sheds and some already met the standards.

There’s been a huge transformation in some sheds – I’ve even heard a claim that the deer behave better now!”

Last season 300 sheds were audited. Of those, 163 were compliant, 123 still had to complete their improvements and in 14 cases farms had been sold or farmers chose not to be audited (they will receive another opportunity to prove they have met the RCS requirements).

Tacon said the NVSB will audit another 300 sheds this year and non-compliance work should be completed within the agreed timeframes. If you had made the necessary changes but had still not been audited, it was okay to still sign the Velvet Status Declaration (VSD) to that effect. “If you haven’t made improvements and don’t intend to, think very carefully about signing the VSD.”

He said the farmer/velveter is legally responsible for signing a VSD correctly and the velvet buyer was obliged to ensure that the farmer/velveter VSDs were completed correctly. From next season the buyer will have a different VSD when they on-carry velvet consignments.

Tacon said all velvet – whether removed by a vet or under the NVSB rules – must meet RCS requirements if it is to be sold to a risk management programme operator under the Animal Products Act 1999.

He expected that more will meet the requirements when audited this year, given they will also have a year to achieve full compliance. However he noted that any that don’t comply within that timeframe will be listed as such; MPI will have access to that list and will share it with velvet buyers. Subsequent audits will be user pays, he said. “I’d rather not see any premises on that non-compliant list!” ■





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Environmental code launched

by Phil Stewart, *Deer Industry News* Editor

Many years of experience and hard work were unveiled at the conference with the official launch of the Deer Industry Environmental Management Code of Practice. DINZ Chair Ian Walker and outgoing NZDFA Chair David Morgan presided over the launch.

IAN WALKER SAID the Deer Industry Environment awards initiated by the late Sir Peter Elworthy in 2000 had been an important landmark.

“Those awards are more relevant than ever today – they showcase our efforts to the public and our markets, and more importantly they showcase good management practices to other deer farmers.

“As we all know, farmers learn best from other farmers.”

He said good environmental practices began to be codified in 2004 with the first New Zealand Deer Farmers’ Landcare Manual. That document was comprehensively updated in 2012.

Focus farms and Advance Parties that concentrate on environmental management, and research programmes looking at ways deer farmers can improve environmental performance, had all contributed.

“NZ Landcare Trust videos showing good deer farming environmental practices, and the Deer Fact sheets are also highlighting environment topics,” he said.

“A lot has changed since our environment awards were launched. Regional councils are now working to put the amended National Policy Statement for Freshwater Management into effect, and with the change of government last year, that policy direction



DINZ Chair Ian Walker and NZDFA Chair David Morgan at the launch of the Deer Industry Environmental Management Code of Practice.

Greater environmental focus to come

Introducing the conference environment session, DINZ CEO Dan Coup said the detail of what government was thinking on environmental matters wasn't entirely clear, but there were three major pieces of work being done that affect agriculture:

1. The National Policy Statement on Freshwater Management that has driven regional council plans is being revised.
2. Agriculture will likely be brought into the Emissions Trading Scheme, with its financial exposure initially restricted to 5 percent of total emission liabilities.
3. A new National Policy Statement on Biodiversity is being written and will also be handed to regional councils for implementation.

Coup said that in response to the increased policy activity at central government level, DINZ will be dedicating more resource to environmental stewardship, putting more “boots on the ground” at farm level. He said that the deer industry was “ahead of the game” for a long time. “That was great, but others have caught up. We need to get back ahead of the pack.”

isn't going to change any time soon.

“It's no longer good enough to just go out and change a few things on your place in the hope that you'll be complying with the rules. It takes good planning, good advice and good documentation. You need to show you're doing the right thing.

“The Deer Industry Environmental Management Code of Practice brings together and updates all of the good advice that's gone before and it provides you with a clear pathway for putting that into practice in a way that's going to satisfy the regulators.”

Walker said DINZ wanted to see about a quarter of all deer farmers having used the new code of practice to help put together a Farm Environment Plan by 2019 and all deer farms to have done this by 2020.

David Morgan said the Code is a “fantastic resource” that was practical and easy to follow.

“I was pleased to see that some of the things I've been doing at home are also in here! At Raincliff Station, we have our share of environmental challenges.

“When you're farming deer, that means you have to take a lot of care with pretty much everything – stock management, paddock design, the crops you grow, water reticulation, nutrient management, waste management – you name it, we have to think about it.”

Morgan said that if you farm deer well, you are half way there when it comes to meeting your environmental obligations.

“Deer that are healthy, well fed, not stressed and given the room to act like deer will be a lot easier on the environment than a poorly managed herd. Good environmental practices and good

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Meanwhile back on the farm ...

by Phil Stewart, *Deer Industry News* Editor

Hamish Orbell (Clayton Station), Hamish and Julia Mackenzie (Braemar Station) and Nuffield Scholar Ryan O'Sullivan took to the stage to round out the Environment session with an on-farm reality check.

HAMISH ORBELL PAID tribute to his parents for the development work they'd done before he took over. He explained that deer have become increasingly important on the 4,000-hectare Clayton Station in the past 10 years, partly through their involvement as a Focus Farm. The station now carries 22,000 stock units.

"We had to think hard about how we would run the deer. They are integral with the sheep and cattle. We had to fence the developed area in a drained swamp differently, and take locations of wallows and watercourses into account. Our flats are extremely wet."

The Orbells have developed a way for the water leaving the property to do so via up to three areas dedicated to sediment and nutrient capture, although *E. coli* remains a challenge in the man-made watercourses that were built in the 1970s for stock water. One has since been replaced with reticulated water.

He said fencing waterways was difficult and costly and it wouldn't be practical to fence every last one.

Orbell said the willows along waterways on the flats in the deer farm have been tidied but will have to go completely once replacement plantings have grown. The important thing is that there will be continuous shade and shelter.

A lot of the previous development at Clayton Station had removed shade and shelter and this was gradually being reinstated for the next generation. Horizontal strips left unsprayed on the hill block were helping trap nutrients and *E. coli* and provide shade and shelter for hinds and fawns.

- Hamish and Anna Orbell won the Firstlight Award in the 2015 Deer Farmers Environmental Awards, for total commitment to farming sustainably with a strong customer focus.



Unsprayed strips of native vegetation at Clayton Station provide shelter and help filter runoff.

Julia and Hamish Mackenzie run the 5,000-hectare Braemar Station on the eastern side of Lake Pukaki. Hamish's parents bought the (then 24,500 hectare) station in 1969. It was in just seven blocks and very rundown. The station lost about 400 hectares of flats (including lucerne paddocks) when the lake was raised by 37 metres in 1977 and the family had the challenge of re-establishing their house and farm infrastructure.

Hamish's parents Carol and Duncan introduced deer in 1981, and the family has done major development over the past 30 years.



Julia and Hamish Mackenzie, Braemar Station.

About 650 hectares is now deer fenced, including 100 hectares of developed pasture. They currently run 950 hinds, 100 stags and 300 young stock. Hamish said they are mindful of the environmental impact of deer but enjoy the challenges. "My parents had to re-establish the farm. Our main challenge is all the rules and regulations we work under now."

Environmental challenges include some wet and heavy soils and the ever-present scourge of wilding pines. This could make the ETS interesting, as the district plan prohibits any conifer planting.

They have a good balance of tussock and developed country, with the tussock essential for lambing and fawning. Over the whole farm, 600–700 hectares is developed pasture.

Julia Mackenzie said the income streams are sheep 40 percent, and beef, deer and tourist accommodation 20 percent each (Carol and Duncan started a tourist accommodation business in the 1990s using surplus buildings and this has expanded to a 38-bed capacity).

Julia said they had recently redone their Farm Environment Plan, which has given them some ideas about the property's strengths and weaknesses and how to tackle environmental challenges. "We've been pleased to see DINZ committing resources

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Sobering message from environmental moderate

by Phil Stewart, *Deer Industry News* Editor

Guy Salmon has dedicated his career to environmental matters, but conference-goers worried they would receive a blast from an extreme campaigner could relax. The keynote speaker has a broad background in policy, governance and consulting to successive governments and Crown entities on a wide range of sustainability issues.

FOLLOWING HIS INVOLVEMENT with the former Native Forests Action Council in the 1970s, Salmon has evolved into an environmental centrist, standing unsuccessfully in the 1996 election for the “blue-green” Progressive Green party and then in the 2002 election for the National Party. He is now chief executive of the Ecologic Foundation, which focuses on integrating environmental, economic and ethical benefits.

Despite his moderate views and sympathy for business, Salmon identified a few “work-ons” for the deer industry in its efforts to lift environmental performance.

The deer industry was to be praised for its efforts to get products into premium markets, its entrepreneurship and early attention to environmental impacts, he said. Nonetheless it faced big strategic issues.

He believed there was a lack of accountability from governments to meet community expectations on the environment.

Part of the reason the last government lost the 2017 election was a failure to keep up with these expectations, despite the efforts of Salmon’s “old friend” Nick Smith to move the “laggards” in Cabinet forward.

Just as there was a long tail of laggards on environmental matters in the last government, Salmon said there were laggards in the farming community. “They should be advised to move forward or invited to exit the industry.”

He said climate change was indeed our next “nuclear-free moment” as noted by the Prime Minister. “It’s happening fast.”

Code of practice

Salmon said the Deer Industry Environmental Management Code of Practice was detailed and good, and would drive a lot of learning and change. But there were three major limitations.

1. **Getting everyone to change**, especially the laggards who will undermine the industry’s reputation, brand and social licence. “There is a gap between what’s in the code and community expectations.”
2. **Accountability**. “Even if you are well motivated, the cost of measuring your performance at property level is too great. You could use models like OVERSEER or LUCI¹, but they need a lot more work.”

¹ Land Utilisation and Capability Indicator. Developed in Wales in 2006, adapted for use in New Zealand by Ravensdown and Victoria University of Wellington.



Guy Salmon: Commercial forestry only a temporary offset for emissions.

- Salmon said community catchment groups like the Lake Kaniere group led by Federated Farmers President Katie Milne demonstrated great potential for meeting environmental standards by giving farmers flexibility in how they met them.
3. **Not going far enough**. Salmon said the code of practice could be seen as quite lenient, with many “where possible” qualifications. “It needs to be seen as a way of getting to the standards the community has set.” Salmon said issues like winter feeding on crops were an increasing challenge, both environmentally and for animal welfare. “We know that the most dangerous greenhouse gas, nitrous oxide, is generated disproportionately from urine falling on cold, muddy ground in winter. You need to find a way forward on this.”

Catchment groups

Salmon said these groups were highly effective and brought together people from different sectors to work collectively on solutions, including soil conservation, stream planting, greenhouse gas mitigation, biodiversity and so on. “This helps

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Guy Salmon: continued

engage that long tail of laggards.”

The group could bring in outside expertise where needed or undertake shared projects such as wetland development that would be too much for individuals to contemplate.

Climate change

Salmon said “almost nothing” had been done since New Zealand signed the convention on climate change in Rio in 1992. “That 26 years of prevarication is coming to an end because of the [2017] change in government.”

Despite a lot of research, no cure had been found yet for methane emissions from ruminants. Meanwhile the world was moving away from ruminants and towards monogastric animals (pork and poultry) and plant proteins.

“If we can’t reduce emissions we will have to pay for them through the emissions trading scheme (ETS) by paying for an offset. It will be a cost of doing business.

“By increasing the value of your product you’ll be able to afford to pay for your share.”

Salmon noted that agriculture would be exposed to only 5 percent of the total cost of an ETS. He said that could lead to a public perception that farming was being subsidised – something that needed to be overcome by taking up more of the load. He agreed that this “subsidy” was not the same as Robert Muldoon’s “bag of tricks” used to subsidise farming in the 1970s and 80s, but he said simply denying that farming was receiving some support from outside the sector wouldn’t work.

“Farmers will finally get a reward for doing the right thing [reducing emissions]. That will grow as the 5% figure grows.”

Salmon warned that planting a commercial forest doesn’t permanently offset emissions – it just delays the liability for the next generation when the trees are harvested after 28 years. He said the only way to permanently offset emissions of long-lived gases like nitrous oxide was by planting permanent forest. Methane on the other hand was a relatively short-lived gas, so a

commercial forest would be an “environmentally honest” way to address it.

“When all the trees that were planted in the early 1990s come into harvest, there will be a huge spike in our liabilities. We can’t keep doing that.

“Once we have a net zero carbon emissions economy, nitrous oxide is going to get a lot more expensive.”

Nitrous oxide was the worst greenhouse gas but there were options to mitigate it. One of these was “closing the nitrogen cycle”. Nitrogen is imported in urea or feed such as PKE and much of this ends up in waterways.

Salmon said ways to help close the nitrogen “loop” included better breeding, use of biological or organic systems and greater use of legumes. Feed pads to stop urine going onto wet muddy ground could also help, he said, although not if stocking rates were increased to help offset the cost.

“We need reliable measures of the financial performance of these systems. It’s complex but necessary.”

A positive note to finish

In discussion following Salmon’s presentation, Agriculture Envoy Mike Petersen advised farmers not to get fixated on the ETS. “We need to focus on the zero carbon goal by 2050 and how we are going to get there. If the farming sector achieves zero net emissions, then the cost of the ETS will be zero.”

Petersen said he had been interacting with several key Ministers on environmental issues including James Shaw, Damien O’Connor, David Parker and Prime Minister Jacinda Ardern.

“The Prime Minister doesn’t want to go to war with the farming sector. She is resolute on that. They are genuinely ready to work with the sector if you are prepared to buy into the bigger long-term goals. They will give you time; they’re prepared to help fund the technology and tools to reach those goals. They don’t want to regulate – they want the sector to pick this up themselves.” ■

Environmental code: continued

business do go hand in hand.

“The things you do might be as simple as putting crushed rock around some water troughs to stop the deer making a mess, or it could be a big phased project retiring and planting some sensitive areas.”

Morgan said that where people have started making changes like this, it doesn’t take long before the work starts to bear fruit.

“People feel incredible pride when they see a healthier stream or more bird life appearing on their farm. It’s hard to put a price on that.”

Walker and Morgan thanked lead authors **Janet Gregory** and **Edmund Noonan**, who were joined on the Code committee by **John Somerville**, **Bob Kingscote**, **William Oliver**, **Tony Pearse** and **Lindsay Fung**, representing the deer industry, and **Leo Fietje**, **Dave Connor** and **Bala TikkiSETTY** from the regional councils.

- The Deer Industry Environmental Management Code of Practice was produced by DINZ as part of the Passion2Profit strategy, a partnership between DINZ and the Ministry for Primary Industries. It can be downloaded from www.deernz.org
- To order a hard copy email: info@deernz.org ■

Back on the farm: continued

to environmental work – it’s needed. Once a rule is written it’s hard to get changed, so it’s important for the industry to get involved at the policy level.”

- Hamish and Julia Mackenzie won the NZDFA Next Generation Award in the 2017 Deer Farmers Environmental Awards, for outstanding performance across environmental, financial and social aspects of the business.

Ryan O’Sullivan was one of six Kiwi 2017 Nuffield Scholars, travelling for over 4 months. He said “confinement” livestock farming overseas was attracting negative perceptions, which presented opportunities for our free range systems.

Like previous speakers he felt New Zealand had not realised its potential in terms of value for its produce and the development of brands. “We’re good at developing our farms but poor at spending money to underpin our marketing.”

He said that Nuffield scholars from other countries had asked him about New Zealand’s water quality issues. “The reputation is worse than the reality,” he said.

Issues like environmental damage caused by winter feeding on crop need to be addressed, he said. “There’s big demand for our grass-fed meat, but we need to clean up our act.” ■

Next Generation put their questions

by Phil Stewart, *Deer Industry News* Editor

Seven years ago, when the deer industry conference last came to Timaru, the focus turned to the young people who are stepping up to take charge of the deer industry as the older pioneers retire. The “Faces of the Future” forum in 2011 soon evolved into the NZDFA’s Next Generation programme – now a well-established model for training and mentoring young people in the deer industry.

FORMER NZDFA CHAIR and now DINZ board member Kris Orange has been part of that vanguard of change and chaired a panel of South Canterbury’s Next Generation in dialogue with industry leaders.

Keeping the good (velvet) times rolling

Brad Travers wanted to know how DINZ would “keep [velvet] prices where they are today and help push New Zealand to a better place”.

DINZ CEO **Dan Coup** said velvet had always been “up and down”, and the past few years of stability were unusual. “We want to keep that ‘unusual’ going. The competition between China and Korea helps, but our movement to healthy foods has also contributed. That’s going great in Korea but will plateau and we want to find a way for healthy food in China too.”

He said that for 35 years velvet was a high-value, low-volume commodity trade. Our industry needed to develop good relationships with large companies with a brand at stake, and wants long-term stable relationships with reliable high-integrity partners in New Zealand. “We haven’t reached that stage yet.”

Attracting the Next Generation

Travers asked what DINZ was doing to attract the Next Generation to the industry.

Kris Orange said there was a concerted effort to get young people to events like the deer industry conference and into leadership positions.

Dan Coup noted that the Passion2Profit programme engages with young people through activities such as the Big Deer Tour, which identifies young agriculture industry leaders of tomorrow and immerses them in the deer industry, “so they will always have

a soft spot for us”. Initiatives to support formal training courses through Primary ITO were also helping.

Farm ownership and succession planning

James Pearse wanted to know what the board was doing to help young people get into farm ownership.

Coup said that was a pan-agriculture problem beyond the reach of the DINZ board, but said a series of succession planning workshops organised by DINZ was underway. “There is no single answer for this, but you need to start the conversation [about succession] sooner rather than later.”

DINZ chair **Ian Walker** said barriers to entry for young people in farming were nothing new, but there were big opportunities for young people in deer, sheep and beef. “There are opportunities for leasing, for shared partnerships, for creating grazing companies, for example. I’ve seen successful cases where the young person wanting to get a leg up into the industry has the right attitude.”

Abby France said it would be useful if there were proposed business structures specific to deer that could be taken to lending institutions.

Walker said there was no specific DINZ strategy about this, but noted that there was a big effort to educate rural professionals about deer farming. “They only understand numbers, so if you understand your own numbers well, it puts you in a better position to negotiate.”

Product pricing

Mark Tapley was concerned that prices for deer products remain sustainable and we don’t price ourselves out of the market. **Abby France** was also keen to see long-term security and was concerned about maintaining prices as the herd grows and supply increases.

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Next generation: continued

Kris Orange noted that the venison marketers had helped us diversify out of Germany into North America but the petfood industry was also supporting prices. He agreed with Mark Tapley that telling New Zealand's unique story would help maintain prices, but he didn't think it was ever going to be realistic to be able to present banks with the certainty of a three-year contract.

Grant Charteris noted that DINZ was collating some information on gross margins in deer that would provide a better toolbox for people to take to their lenders.

Leadership

Kris Orange said the Next Generation programme was a big success, with about 60 attending each year, including 30 who had not been before. He challenged conference delegates to say what they were doing to harness the youth and enthusiasm of the Next Generation. "What are you doing to help them get a foot in the door of ownership?"

Mark Tapley was concerned that not enough good information was filtering out to young people. He said the Deer Hub and Next Generation Facebook page were good, but more effort was needed.

Tim Turner said regional workshops and field days provided a much more relatable experience for young people. "They've just been through school and university and they don't want to just sit here flicking through more slides. They want to be out there doing what they love. The industry is doing that but it's up to owners and managers to provide their young staff with these opportunities too." ■



Then and now: Top photo – The "Faces of the Future" panel from the 2011 Timaru conference (youngsters in the back row, "wise men" in the front) and (lower photo) the panellists from the 2018 Timaru conference, from left: Abby France (Great Southern Deer Farms and FMG), James Pearse (Pleasant Point), Brad Travers (Hunter Hills), Mark Tapley (Peel Forest Estate) and Tim Turner (The Kowhais).



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Can we do “venison gold”?

by Phil Stewart, *Deer Industry News* Editor

The deer industry and the modern kiwifruit industry each emerged at about the same time, in the 1970s. Since then they have trod their own paths, but as deer farmers learned at their conference in Timaru, there is much to learn from our horticultural neighbours.

LAIN JAGER, WHO was CEO of Zespri for 9 years until 2017, shared his thoughts about growth and creating value. While venison is unlikely to ever match the tightly controlled production and marketing model of the kiwifruit industry, there was still plenty we could learn from their example.

Jager said trading food as a commodity was relatively easy. The real challenge was adding value. Using the “smile curve” graph, he showed that most value was added to products at the beginning (R&D, branding, design) and end (distribution, sales/service, marketing) of the value chain. The least value is added during the actual “manufacturing” (growing in our case) of a product.

Venison's place

Venison didn't even appear as a blip on the figures he showed for world meat production, but the numbers did provide interesting perspective. As is well known, chicken and pork now dominate the annual 322 million tonnes of global raw meat production, which is currently growing at 3 percent per annum.

Part of the secret to the success of those white meats is their superior feed conversion ratios, Jager explained. Fish, chickens and pigs consume just 2.3, 4.2 and 10.7kg of feed respectively to make 1kg of edible weight. The figure for beef cattle is 31.7kg; deer and sheep would be even higher.

Sheep and beef was the main competitor for venison, he said, noting that the poor reproductive efficiency of deer handicapped the industry. In the commodity trade, other factors included scale, productivity, land and labour costs, exchange rates, cost of capital and distance to markets.

Value added was preferable to a commodity focus, but it wasn't easy, Jager said. “Your product needs to be different and it needs to be hard for others to replicate. Being different is simple until the opposition learn how to do it.”

He said the kiwifruit and deer industries have more in common than you'd think – distance to export markets and a relatively small domestic market for starters.

And just as venison is a tiny percentage of world meat production, so kiwifruit barely registers in its share of fruit consumption worldwide (static at just 0.22 percent).

Unlike deer, however, kiwifruit production in New Zealand has taken off in recent years. Currently 2,000 growers produce 450,000 tonnes off 14,000 hectares, supplying 53 markets. Following a fall in production after the PSA virus hit in 2011, production using new resistant varieties has boomed. Pre-PSA levels were reached in about 3 years and production continues to grow strongly.

Per-hectare kiwifruit returns have also grown, from \$30,000 to



Lain Jager: Sees plenty of opportunities for the deer industry.

\$70,000 in the past decade.

Also unlike venison, kiwifruit production and exporting is strictly controlled through a single-desk system. Production licences are tendered – the more lucrative gold varieties are in especially hot demand, even at a cost of \$600,000/hectare to develop from bare land and with a 4-year wait for the crop.

Jager said the strategy was to develop market demand ahead of supply. (The same could be said of venison, although the ability to quickly build venison supply is not the same.)

New Zealand kiwifruit was hard to differentiate but this has been done via brand and taste. Our main southern hemisphere rival is Chile, which grows the fruit at half New Zealand's cost of production. Zespri's response is to target some markets where New Zealand's provenance is more highly valued. Our kiwifruit realises between 50–100 percent more than its competitors at point of sale. However, Zespri sources kiwifruit from other countries in our off-season so it can supply its markets year-round.

One benefit that kiwifruit growers enjoy – and which venison producers would love to see replicated – is that they are rewarded for quality when they supply good high-sugar fruit.

Although it's a single-desk seller, there are areas for both cooperation and competition in the kiwifruit business, Jager said. Cooperation centres around R&D, specifications, market allocation, distribution, sales and marketing. Competition still thrives in farming, processing, quality management and retail.

continued on page 22

Lain Jager: continued

What about the deer industry?

Jager had done his homework on the deer industry. He said it is hard to attract investment into a shrinking industry.

“There has to be an expectation of growth. Hopefully the period of declining numbers has ended, but if deer numbers stay low the market will shrink to accommodate this. You can’t sustain high prices through shrinkage – you need to grow.”

Jager said the P2P programme was good and necessary, but warned that as you drive up demand and profits, more people will be attracted into deer, which could see returns start to fall. He felt the cost of converting to deer was relatively cheap – it certainly is compared with dairy or kiwifruit – although he may have underestimated the relative scarcity of deer breeding stock for those wanting to repopulate their deer-fenced paddocks.

He made a strong call for greater investment in R&D by the deer industry. He said the total current level of investment (including the government contribution) is about 0.85 percent of the FOB value of sales. (Zespri invests 1.5 percent of net sales value in innovation and 7 percent of net sales value in sales and marketing.)

Genetics, reproductive efficiency and product quality required special attention from R&D, he said.

“You want to make your venison the tastiest there is, and you want to make it hard for free-riders to get in on the industry.”

On the market side he said the industry needs to identify

the best targets for investment and the best people – such as ambassador chefs – to support the marketing efforts. Consumer insights, product formats and packaging were all important.

Looking at the opportunities and challenges for the deer industry, Jager could see plenty on each side of the ledger, as follows:

Strengths:

- differentiation from sheep and beef
- small community with opportunity to cooperate
- DINZ and P2P
- reasonable profitability today.

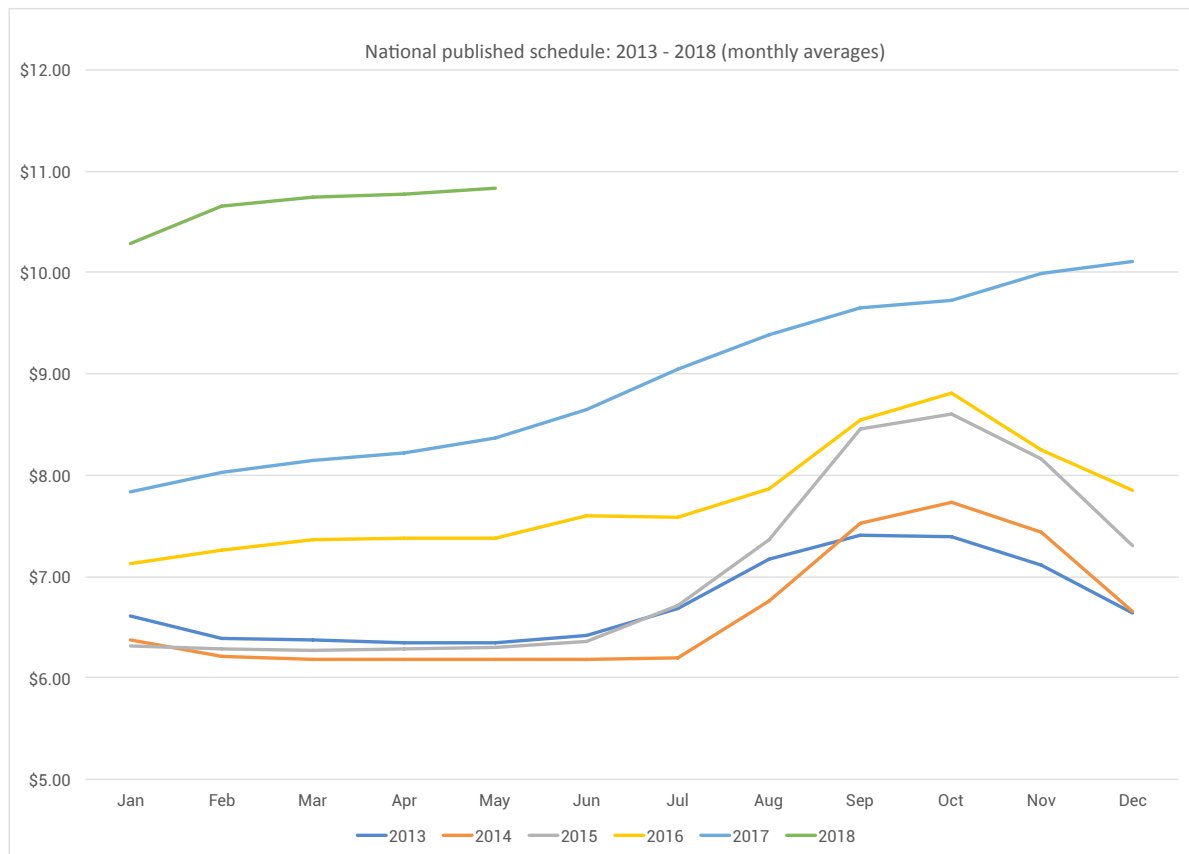
Challenges:

- a tiny segment, not well known
- low cost of switching to deer
- low productivity compared with other meats
- difficult to differentiate meat
- inadequate investment in market development and innovation.

Who makes the investment in innovation and marketing – individual farmers, meat companies or DINZ – is a decision for the industry, but Jager noted two rules of thumb:

- align investment with activity to have accountability and performance
- leverage your investment through scale – working together as a larger group. ■

Market update: Venison schedule



Trade envoy sees upside

by Phil Stewart, *Deer Industry News* Editor

Mike Petersen is definitely a glass-half-full kind of guy. And on his return to speak to deer farmers following his last presentation in 2016, he was fair brimming with confidence for the primary sector. But success is not just going to happen without our seizing the opportunities.

PETERSEN WAS APPOINTED New Zealand Special Agricultural Trade Envoy in 2013 and since then he's been racking up the air miles representing our farming, horticulture and wine sectors.

In that role he's been able to gain useful insights into the shifting sands of international trade agreements and markets. And although New Zealand can be rightly proud of the way it's punched above its weight internationally, it was another similar-sized country that Petersen said should inspire us.

"The Irish 'Origin Green' campaign from eight years ago was pure Irish magic," he said. They had no real back story at the beginning, but they have successfully "backfilled" the narrative since then to support the image created.

Petersen said New Zealand primary exporters have a great story as well, but believes the conversations have been too fragmented thus far. "There's not enough that people can relate specifically to us. People love our more trusted and reserved style and the integrity of our production systems, but we need to promote ourselves more as the natural alternative."

Despite the nice imagery, the "Open Space, Open Hearts, Open Minds" campaign launched five years ago to complement the tourism-focused "100% Pure" hadn't captured imaginations, Petersen said. "It doesn't link to our products. We need to be talking agri-food rather than primary products."

He said the Minister of Agriculture was working with an advisory group chaired by former Zespri CEO Lain Jager to help develop a plan along these lines.

"It needs to be about working with nature to create a valued food, from the most beautiful and trusted place on earth."

Like the Irish with Origin Green, we needed to take a step beyond that to take our products to the world. Turning to trade, Petersen spoke up for trade negotiators. "These are not faceless bureaucrats. They are doing a fantastic job for New Zealand."

He reminded guests that the World Trade Organisation provided an essential set of rules and a framework for New Zealand to trade with the world. He said new channels such as international online retailing would disrupt old patterns, but still be subject to trade rules.

Petersen agreed that progress on trade could be frustratingly slow, but gains had still been made with bilateral and multilateral deals like the Comprehensive and Progressive Trans Pacific Partnership Agreement (CPTPP).

The impending Brexit and the need to protect our existing access to the United Kingdom and EU markets was essential. (The green light for formal negotiations on a New Zealand-EU free trade agreement was given a few days after the deer industry conference.)

"We are also at or near the top of the queue for negotiations



Mike Petersen: Our great NZ story needs to be more unified.

with the UK following Brexit in March 2019. We need to focus on the most affluent markets for our premium products."

Petersen said the CPTPP was huge for New Zealand, even without the United States. "This is 500 million people, 11 countries and 15 percent of the world's GDP. We must be in there. If we opted out we would lose

preferential access to these markets, probably forever."

He said there would be an estimated \$220 million in tariff savings over time, about \$100 million of those on "entry into force". This will happen when the first six countries have ratified the agreement, hopefully by the end of 2018.

Several additional countries were interested in joining, including Korea, Indonesia, Thailand and even the United Kingdom.

On environmental issues, Petersen said it was good that farm leaders, including from the deer industry, were getting alongside each other. "The primary sector is far stronger together, presenting a united position."

While the ETS was important, the country's target of net zero carbon emissions by 2050 was probably even more significant, he said. "It's going to be difficult for farmers, but this government has pledged to work with farmers and allow long transition times. Even if there was a change of government, I don't think any of this direction of travel would be reversed. Can you really see a new National government coming in and reinstating [offshore] oil and gas exploration? It won't happen."

Petersen urged farmers to complete Farm Environmental Plans, although he believes these might be superseded by an all-encompassing plan that also takes in welfare, NAIT compliance, traceability, emissions and so on. "That will be the evidence we need for the integrity of the story we tell about ourselves in the market. It will allow us to differentiate ourselves as the natural, unprocessed alternative." ■

STOP PRESS

Mike Petersen's work on behalf of the primary sector was recognised during the Mystery Creek Fieldays on 13 June when he was named Ravensdown Agricultural Communicator of the Year, by the NZ Guild of Agricultural Journalists and Communicators.

Riding the tide

by Phil Stewart, *Deer Industry News* Editor

The New Zealand deer industry might be a very small cork bobbing around in the seas of international trade, but right now it's riding favourable winds and tides. Rabobank's animal proteins specialist Blake Holgate put the industry in a global context at the deer industry conference.

HOLGATE SAID PRIMARY industry exports from New Zealand are set to rise to \$42.2 billion (up 10.8 percent) for the year to June 2018, the biggest annual rise in four years. The exports earned \$4.3 billion in December 2017 alone – a record for a single month.

The surge in earnings was being driven by horticulture, dairy, red meat and log exports, but the deer industry was also contributing as a star performer. He said the current venison schedule is \$2.00–\$2.50 above previous records for this time of year, and having two good years in a row will do a lot to boost industry confidence.

While tight supply could be credited for the good prices, Holgate said there is more to it than that. Reducing debt, new ownership structures in the meat industry, increased market development work and greater market access were also helping us gain a competitive advantage. China was a great example of the market access story. It accounted for just 5 percent of our exports before the free trade agreement was signed, rising to 21 percent last year and now second only to Australia. The EU, on the other hand, had declined from one-third of our primary sector exports in 2000 to just 13 percent last year.

Holgate said China was a good example of new markets underpinning our red meat industry. Ten years ago less than 1 percent of our beef exports went there – now it's 21 percent. New Zealand venison hasn't made inroads like that in China, but the potential in the East Asia region for the product is huge, Holgate said. He noted that the Comprehensive and Progressive Trans Pacific Partnership (CPTPP) agreement would help in this respect.

He highlighted two related areas that the deer industry should focus on to secure its future: our social licence to operate and the needs of our consumers.

Social licence to operate

This is a relatively new concept that started with mining in the 1990s, Holgate said. The focus has now shifted to agriculture, especially health, animal welfare and environmental practices. He said there is now greater media scrutiny in areas like biodiversity and water quality. The potential costs to agriculture were significant – for example a Ministry for the Environment report¹ indicated it could cost agriculture \$135 million a year to clean up waterways over 25 years – and that was just for *E. coli*. (The deer industry's annual share of this cost is estimated at \$4.17 million.)

Holgate urged farmers to exert their influence on the rules that were increasingly governing the way they operate. We needed to recruit the best and brightest into the industry – as well as into allied professions like science and marketing.

“There's no magic formula for retaining your social licence to operate, but you do need to maintain a dialogue with the community, showing mutual respect. You must keep telling your stories but also be prepared to listen.”

Consumer needs

Responding to consumer needs is linked to the social licence to operate. Holgate said most consumers of our venison aren't locals, but they share a lot of the same concerns.

Alternative proteins are a challenge, but Holgate said most people will remain omnivores and keep eating meat because of the four Ns: “Meat is *natural, normal, necessary* (for health and strength), and it tastes *nice*.”

There will still be changes in consumer patterns though. Holgate said some will eat less meat, but go for higher quality when they do eat it. “Thanks to our high standards, that provides an opportunity for New Zealand producers.”

He said water quality is a big issue for us, but for overseas consumers animal welfare is the bigger issue. “There will always be a natural tension between the needs of consumers and farmers, but we need to focus on a win-win.”

Looking ahead, Holgate said we could learn from the recent past. “In the 1950s and 1960s we made big investments in pastures, fertilisers and genetics. That helped carry farming through the difficult 1970s and 1980s. We don't know how long this good period will last. Where you direct your cash now will define your future prospects for many years to come.” ■



Rabobank's Blake Holgate: maintaining a social licence to operate and consumer needs are important issues for the pastoral industry.

¹ <https://bit.ly/2KZGIXn>

Minister of Agriculture joins in

by Phil Stewart, *Deer Industry News* Editor

Agriculture Minister Damien O'Connor couldn't be at the conference in person but he did drop in via video link. Clearly well up to date on deer industry matters, the Minister was positive about the progress that was being made under the Passion2Profit Primary Growth Partnership.

IN RESPONSE TO a later question about ongoing funding for P2P, he said funding was secure. Nonetheless the Government is reviewing Primary Growth Partnerships with a view to directing resources where they are most needed, e.g. soil and water science.

He said the Government was committed to breaking down barriers to trade and was also keen to see that the benefits of export growth were being shared fairly.

O'Connor acknowledged the industry's long-term strategy to rebuild the deer herd and the role of the companies diversifying markets in Europe. He was pleased to see new life being breathed into Cervena® with support from P2P, and commended the advice of Zespri's former CEO and now Primary Industry Council Chair, Lain Jager about securing a premium for venison products.

"We're committed to helping you along that path."

He said people should be prepared to pay a premium for Cervena products overseas in the same way that the Zespri brand attracts a higher price. He suggested the Zespri strategy for investing a significant percentage of their returns in marketing could be appropriate for the deer industry.

O'Connor said that while there were challenges from alternative proteins and pressures on the welfare and environment front, the industry needed to stay *in* the game as well as *ahead* of the game. To do this they should keep promoting the superiority of venison as a pasture-fed, fine protein grown to the highest ethical, environmental and processing standards. He also acknowledged the very positive prospects for velvet in the Asian market.

He said biosecurity was a big challenge at the moment and he hoped the deer industry was using NAIT effectively for both traceability and helping track stock in the event of a biosecurity incursion. He said the Government was committed to announcing a decision by the end of May on either management or eradication of *Mycoplasma bovis* (a decision to target long-term eradication was indeed announced on 28 May).



Agriculture Minister Damien O'Connor joined the conference via video link.

He wished the industry well. "You can farm deer in places where we can't do much else. The industry has huge potential and I'm sure the market will return the value for some of the world's finest protein. I look forward to helping by opening doors to trade and helping with accreditation systems to support our branding and protecting our country through better biosecurity systems."

Responding to a question on the threat from alternative proteins, O'Connor recalled his days as a dairy farmer when margarine arrived as a supposedly healthier alternative to butter. He said the tables had since turned in favour of butter and urged the deer industry to focus on their natural premium protein as superior to "highly processed alternative proteins".

On the question of GMOs, O'Connor said the Primary Industry Council was looking into the issue, although his personal preference was that New Zealand primary production remain GMO free. He did acknowledge that there were possibilities for GM technology to be used for pest control or pasture production, but said it was not for politicians to make the call. "There's been little industry leadership on this." ■

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Velvet: Leaders of the pack

by Phil Stewart, *Deer Industry News* Editor

Rhys Griffiths, DINZ Market Manager, Asia, kicked off the velvet antler session with a quick four-phase overview of the way the New Zealand industry had evolved to a “staying ahead of the game” position.

THE FIRST PHASE, from 40 years up until about 10 years ago, saw the industry start to “run out of puff”, saddled with an undifferentiated commodity, volatile prices and a reputation as a cheaper alternative.

In phase two we “caught the pack”, with companies like Omniherb in Korea beginning to promote its product on the back of New Zealand’s growing international profile through cultural phenomena like *Lord of the Rings*. Differentiation had started, but 80–90 percent of our velvet was still going into the traditional oriental medicine segment, which was vulnerable to cheating. By this time, consumers were starting to turn to more modern health products, Griffiths explained.

Phase three saw us “changing the game”, with innovation and strategic partnerships with companies like Korea Ginseng Corporation (KGC). The timing was perfect. KGC’s ginseng range was maturing and the company was looking for revitalisation. After “discovering” New Zealand deer velvet, KGC has become the world’s biggest value-added velvet marketer, Griffiths said.

The wildly successful Cheon Nok Sam was KGC’s 19th velvet-based product and retailed for \$US450 for a 30-day supply. Retail sales for this product alone have reached \$130m in just 3 years from a zero start.

That has been followed by other products such as Cheon Nok Tong and the Cheon Nok Everytime, containing 2g of velvet. Other consumer heavyweights are also starting to use deer velvet in the healthy food channel. LG, for example, has launched Chung Yoon Jin, a health and beauty product that features the New Zealand velvet provenance on the packaging. The “New Zealand Deer Velvet” label is gaining the same sort of status as the well-known “Intel inside” label on consumer electronic products.

Griffiths said 23 new products in this channel have been launched since last October, and most feature New Zealand velvet. “It’s trendy to use our velvet in Korea at the moment. Our

clean green image and reputation for food safety boosts the integrity of their products.”

The energetic healthy food sector was now absorbing about 25 percent of New Zealand’s velvet and our production had risen from about 450 tonnes to 700 tonnes with no apparent problems of oversupply at the moment. In the meantime the value of our velvet exports has more than doubled to about \$68m in just five years.

We can’t afford to be complacent, Griffiths warned. Echoing the advice of keynote speaker Lain Jager, he said the current market will mature, volumes will increase and competitors will catch up, while customer expectations will continue to grow.

All of this led to phase four: Staying Ahead of the Game. Griffiths said this would focus on premium positioning and market diversification – both channel and geographic diversification.

The implementation of the Regulated Control Scheme (RCS) provided an important boost to our premium positioning, he said. “What you do on your farm really matters!” Marketing claims such as our pristine environment, leadership in deer farming and high health status were all important parts of the story.

The joint venture agreement with Yuhan Corporation, signed in November 2017, was a good example of channel diversification, Griffiths said. “They are investing in our production chain.”

He said the advertising for a new velvet-based range by Yuhan, “New Origin” had gone viral.

The main effort to achieve geographic diversification was focused on China. Griffiths said velvet consumption there is on the rise but the trade is largely commodity based. “They are where Korea was 10 years ago.”

Partnerships with reputable Chinese companies would help with the transition into the healthy food segment in that country. New Zealand velvet that is consumed in China must now be imported to China as a traditional Chinese medicine ingredient and the implementation of the RCS had helped us comply with the new Chinese regulations. Griffiths said the first full velvet season under the new regime had seen the value of exports to China grow from \$25 million to \$30 million in one year. So far, he concluded, the velvet industry was indeed staying ahead of the game. ■



Rhys Griffiths: Premium positioning and market diversification remain a priority.



KGC's Cheon Nok Sam: Sales have reached \$US130m in just three years.

Buoyant mood for venison marketing session

by Phil Stewart, *Deer Industry News* Editor

DINZ Venison Marketing Manager Nick Taylor introduced the venison marketing update session with news of a refresh of the Cervena® appellation design.

TAYLOR SAID THEIR research had shown the “Natural Tender Venison” tagline was no longer effective and some branding was being used inconsistently. “As promotional methods have changed, it was getting harder to adapt,” he said.

The introduction of Cervena into the summer market for Europe also added a change in focus.

DINZ and the marketing companies embarked on some in-depth research and repositioned Cervena with the simpler “Pure Freedom” tagline. The new messaging is focused around Cervena’s culinary performance and taste.

Secondary messages feature advantages such as our expertise in deer farming, quality systems and providing a creative culinary platform.



Nick Taylor: Cervena repositioned.

The logo design was updated for today’s communication channels such as social media (still a long way into the future when Cervena was originally launched). However, Taylor said some continuity was preserved, including the diamond motif that is so strongly associated with the appellation and now reinforced through objects like diamond-shaped plates. (See also *Deer Industry News*, December 2017, page 13.)

New food and chef photography had been commissioned to update the marketing materials and emphasise the “live-action” creativity angle.

The refreshed design was also introduced into the latest summer Europe marketing, with strong colour accents complementing the logo. Summer-specific taglines had also been provided.

Introducing the Antipocureans

Chris Bristol, Group Manager Brand and Communications with



The diamond motif remains as strong visual element for Cervena.

Alliance Group, detailed the evolution of the organisation from meat company to food company. Alliance took the good news story about premium meats to a new level when they created the “Antipocurean* Series”. They brought a group of international chefs to New Zealand in April to experience our top restaurants and see where the finest products are raised.

Bristol said the visiting chefs and media were particularly impressed with the venison they tasted on their tour. “We want to change market perceptions of our products and the talents of the people behind them. They were in awe of our country and impressed by our connection to the land. We wanted them to associate New Zealand with the finest red meats.” (See more about this tour on page 36 of this issue.)

* Antipocurean is a portmanteau of “antipodean” and “epicurean”



Chris Bristol: Alliance Group is evolving to a food company.

continued on page 28

Venison marketing: continued

Long-term US investment rewarded

Glenn Tyrrell, General Manager Marketing with Duncan New Zealand explained how the stars were aligning for venison exporting at the moment. He said the schedule was probably “fully priced” and being supported by eight or nine factors, not just short supply.

In the United States, a long-term commitment to the Cervena programme was paying off as demand increased for natural grass-fed meat, with no domestic competition for farm-raised venison and a booming foodservice and restaurant sector.

The 30 percent drop in venison production hadn’t been all bad, and had allowed the company to cull customers who didn’t have the same investment in the value chain, Tyrrell said.



Glenn Tyrrell: Long-term commitment is paying off.

was performing well, meaning the entire animal was in good demand.

While some retailers in Europe had been backing off strong leg prices, the summer Cervena campaign was helping redress the balance in this zone.

“We’re also seeing growth in other smaller markets like Asia, Australia and here in New Zealand.”

“Jane” is our future

Toni Frost, Sales Manager with Firstlight Foods, floated the idea of a hypothetical, ultimate customer, “Firstlight Jane”.

“Jane represents our model venison consumer,” Frost said. “What is she thinking? Where does she shop? What does she believe in?”



Toni Frost: Venison strikes the sweet spot for “Jane”.

The petfood sector was also helping underpin carcass values at the moment, with pet owners willing to pay a premium for a proportion (as little as 6 percent) of venison in their animal’s diet. Meanwhile in Asia, demand for other co-products was strong, and velvet

“Jane wants to know the person who raised her meat and shares her moral compass. She wants to know her products don’t have any ‘nasties’ in them and she wants to impress her friends with her knowledge of provenance and how to cook it.

“She is staunchly anti-industrial farming and is concerned about her [environmental] footprint. She searches for the logos and other attributes that assure her that her food is safe – no GMOs or antibiotics, high in iron and low in fat. Animals are treated fairly and we are kind to the environment. She doesn’t like synthetic foods.”

Frost said last year’s keynote speaker Kaila Colbin had spoken about an \$80 synthetic burger. “Today we heard about a \$1.99 synthetic burger. These foods are coming, like it or not.”

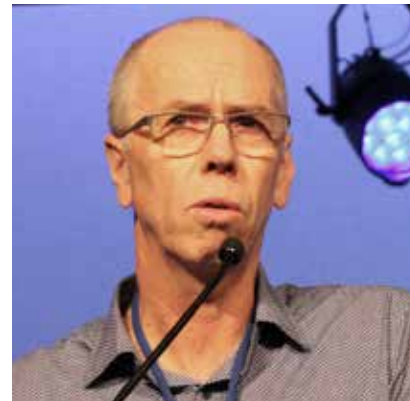
She said the good news was that New Zealand farm-raised venison was right in the sweet spot for “Jane”.

“We must continue to keep our venison as a premium meat and tell our true story about how it was raised. This is the future for New Zealand venison.”

Persevering in China

John Sadler, Marketing Manager with Mountain River Venison, updated the conference on the company’s tenacious efforts to build a market for venison in China.

He said China takes some getting your head around. “There are 100 cities with more than one million people and by 2030 more than one billion people will be living in cities there.”



John Sadler: China takes some getting your head around.

After two and a half years working in China through Hunter McGregor, there were now 140 restaurants around the country serving Mountain River venison, Sadler reported.

Top chefs such as “Chef of the Century” Joël Robuchon with his Michelin-starred Le Monde and L’Atelier restaurants in Shanghai were

giving venison a high profile there. Alan’s Bistro in the same city was also providing a great shop window for venison dishes such as braised shank, year round.

DINZ executive chef Graham Brown has been working with Alan’s Bistro and has also just visited Swiss chef Christoph Zoller at Beijing’s Fairmont Hotel for a venison tasting. Sadler said Zoller was providing some adventurous dishes with venison, including a tartare and a roasted rump.

And a Peruvian restaurant in Shanghai is serving venison ribs, while M on the Bund in Shanghai is successfully providing raw dishes, despite the Chinese aversion to pink/rare red meat.

“We are looking forward to telling you about venison spreading into Chinese cuisine, but I’ll save that for the 2030 conference!” Sadler concluded.

Connecting with people

Nicola Johnston, Marketing Manager with Silver Fern Farms, completed the line-up of marketing company presenters.

She said all people crave human connection and the company



Nicola Johnston: Strong showing for venison in restaurant awards.

uses that to connect farmer, chef and “armchair” experts – the consumers. “When we get the connection points between market channel and brand working, something magic happens.”

This “connection” approach was working well in New Zealand. This is the fourth year of the Silver Fern Farms

Plate to Pasture awards, celebrating the excellence among farmers who supply the best venison. “Those stories give our brand a human face and get our consumers yearning for their rural roots.”

Chef expertise is also recognised and this is the fifth year of the Silver Fern Farms Restaurant Awards. One-third of the 63 entries in the 2018 awards were venison, Johnston said, and four of the 12 finalists are venison dishes (see page 40 for results).

“Our local food scene is in good heart.”

Events are hosted at finalist restaurants where diners and farmers come together to share their experience, she said.

“We also take the trends and techniques we see in foodservice into the retail consumer’s world.” An in-store promotion this year will teach consumers how to infuse spices and exotic flavours into venison.

Venison consumers were giving great feedback via social media and this was reflected in market growth, with \$2m in local retail sales and the company now rating 12th in Colmar Brunton’s Corporate Reputation Index (up from 33rd the previous year).

Feedback

Sir **Tim Wallis**, a loyal and regular conference attendee said he was proud to hear these presentations from the marketing companies. “The whole lot of you are good.”

He said venison was helped by the tax system until the 1980s when Roger Douglas removed the incentives. “Now we are farming venison for what it really is. That’s a good thing. You’re competing against sheep, cattle and dairy and our numbers are now at a steady bottom, but look at the price! I’m proud to be one of the pioneers and see how well it’s growing now – venison and velvet.”

Graham Carr acknowledged Sir Tim’s role in founding the industry. “He wanted deer farmed and not killed. If it wasn’t for him, none of us would be sitting here today.”

Jamie Ward, AgResearch, asked the company representatives what attributes would “hook customers for life”.

Toni Frost of Firstlight said the emphasis was “less is more”, encouraging high-end consumers to value venison, albeit in low quantities. **Glenn Tyrrell** said the Cervena programme guaranteed many quality attributes, but Duncan NZ was looking to expand on that through the farm assurance scheme, for example, excluding GMOs.

Donald Whyte asked if the cooperation between marketing companies through the P2P programme could be furthered.

Terry O’Connell (Alliance Group) said P2P gave companies a chance to collectively achieve things in the market that they couldn’t do alone. **Glenn Tyrrell** noted that farmers often wanted the benefits of “capitalism at the farm gate but socialism in the market”. He said the cooperation through P2P was “great” but added that “going forward, if you want the levels of investment you see in the kiwifruit or dairy industries, you’ll need to think about compulsory investment across all companies – something they would have to deduct off what they pay all farmers.”

Paddy Boyd asked if there could be just one farm assurance programme. **Toni Frost** said that was being pursued through the Red Meat Profit Partnership and P2P, but noted that each company had its own niche customers so would have “add-ons”. “All those extra attributes such as environmental care will help.”

Terry O’Connell added that farm assurance programmes are customer driven. “We can’t keep going back to the national body every time our customers’ needs change. We have to be light on our feet.”

Glenn Tyrrell noted that all marketing companies bar Alliance were going to be part of the farm assurance programme being rolled out by DINZ. “It’s been produced with a lot of consultation with farmers.” He agreed that the Environmental Code of Practice may eventually start to feature in that programme, “but we mustn’t get ahead of ourselves [in the short term] – you already have a lot on your plates with local council requirements”.

Graham Carr said there were current challenges for marketing companies supplying product in the traditional spring chilled season, “but I suppose if you paid us \$13 or \$15, then that would fix it!”

Glenn Tyrrell said the spring market was already under-supplied last year as some farmers chose to hold stock until later, but it was uncertain whether this would continue. **John Sadler** said the market diversification into the United States and the European summer were taking focus away from the spring chilled season. “It’s still important but it’s not the primary focus any more”. **Terry O’Connell** said it was important to keep supplying the traditional game season so the post-season balance could be maintained. ■



Sir Tim Wallis: Impressed with company activities.

Awards evening

Highest accolade for Andy Macfarlane

FORMER DINZ CHAIR Andy Macfarlane was a very popular choice for the Deer Industry Award for 2018, the 34th year of the industry's top honour.

The award this year was judged by Dave Lawrence, Mark O'Connor, Don Bennett and Alastair Porter. Andy was jointly nominated for the award by Jeff Pearse, the NZDFA Executive Committee and the DINZ Board – a clear signal of the universally high esteem in which he is held.

In their comments the judges said we can all learn something from Andy's philosophy and example.

"Andy consistently does the right things for the right reasons with vision and at scale. He understands that it is the people of the deer industry that matter, and he genuinely cares deeply for individuals and their wellbeing.

"Andy's philosophy is that although profitability is a very necessary consequence, it is the individuals and the connections they form that lead to vibrant, strong, caring communities. This in turn leads to fulfilment and success – at both the individual and community levels.

"The embodiment of Andy's philosophy in the deer industry is the Passion2Profit programme. At its heart, the programme is about supporting farmers to give them the confidence to change and adapt as the world changes around them. It is founded on Andy's premise (and others in the programme) that each person and their circumstances are unique and to be respected.



Andy Macfarlane speaking in response after the Deer Industry Award was announced. Photo: Trevor Walton

"The programme does not seek to teach or motivate. Rather, it supports farmers with resources to learn, develop and improve themselves and their farming business – and so improve the deer industry as a whole. It is in a large part due to Andy's innate understanding and care for people."

While Macfarlane's leadership over seven years was being recognised, the jewel in the crown of his time at the board table was undoubtedly the \$16m Passion2Profit programme, now midway through.

Accepting the Award, Andy said he was "stunned".

"I thought my legacy to the industry might be rugby analogies,"

he joked. True to form he said that when wearing the jersey, all you can do is put your own stamp on it and leave it in a better place for the next person taking over."

He said he was delighted to see the young talent starting to emerge in the industry. "If we can replace ourselves with this talent – on farm, in science, in governance – then we have a viable industry."

Macfarlane acknowledged the challenges that remain but said the positive work being done in areas like the Next Generation programme and the environment meant we were on the right track.

He said he'd recently been told that regulations are a sign of design failure.

"If we do the right thing, we won't need regulations. The P2P programme is designed to get people working together. If we can apply that enthusiasm to the environmental side, the deer industry can be an exemplar for agriculture in New Zealand, and New Zealand can be an exemplar for the world."

Matuschka Award for deer trucker

GEOFF YULE IS the 2018 Matuschka Award winner. The long-serving deer transport operator was nominated by the Central Regions Branch of NZDFA.

The Matuschka Award, initiated in 1996, acknowledges the contribution of DFA branch members at grass roots level, typically those who never seek any recognition and whose work at local level is has been unheralded.

Award founder Murray Matuschka was joined on the judging panel this year by Bob Swann, Tony Pearse and last year's co-winners, Murray Coutts and Craig Hocken.

Geoff did farm deer in the early days of the industry, but his real contribution for the past 27 years was as the owner of Geoff Yule Transport (recently purchased by Downlands Deer).

He started out with a trailer and a crate in 1990 and over time, progressed to five trucks that carted deer to the works, store deer, and trophy animals around the North Island and sometimes the South Island.



Geoff Yule: Nearly three decades of service through deer transport business. Photo courtesy Aaron Davies/Farmers Weekly.



His nominators said Geoff “did a great job of picking up small mobs of deer from some pretty poor loading facilities in the early days – many would have cost him more in time and money to pick up than he would have made from carting them. He would always try to accommodate farmers and agents.”

Geoff was also known to lend his trucks to farmers at times. “They repaid him by driving for him when he was caught short.”

He was a keen supporter of the former Manawatu Branch of the DFA and latterly the Central Regions Branch, and sponsored velvet competitions and branch activities.

In making their deliberations, Murray Matuschka told his fellow judges that “this is just the sort of guy [the Matuschka Award] was for”.

Central Regions Branch Chair Tony Gray accepted the award on behalf of Geoff Yule at the Award Dinner during the 2018 deer industry conference. He said Geoff would be humbled by the honour.

In keeping with the spirit of the award, it will be formally presented to Geoff at a Central Regions Branch mid-winter function next month.

Double winner at photographic awards

MARK TAPLEY OF Peel Forest Estate cleaned up at the 2018 MSD Animal Health photographic award, winning the both the overall competition and People’s Choice awards.

The judges received a record 59 photos from 20 entrants this year, a fantastic effort. Announcing the winners at the Awards Dinner, *Deer Industry News* Editor Phil Stewart said the competition had been streamlined this year with entrants no longer needing to submit prints.

“Our thanks to sponsor MSD for making a big monitor available to display the entries at the conference this year.”

He and fellow judges Cenwynn Philip, Tony Pearse, Sam Higgins (MSD) and professional photographer Lindsay Keats looked for photos that are technically good but also show the industry in a positive light by conveying our core values.

Judges’ comments this year included:

- We got some terrific entries again this year although the technical quality was not there in every case; however the enthusiasm and passion of entrants for their animals was as strong as ever.
- Many entries are taken on cellphones, not a problem in itself but beware of their limitations. Don’t use the zoom function, check that the lens is clean and maybe turn off the motor on

your quad before you hit the button!

- Your deer should know you, so try and get close to them if shooting with a cellphone.
- Take heaps of photos – pick the best and think about composition – it’s OK to crop them and our winner did that very effectively this year.

Results

First place (\$500 cash prize plus framed print): **Mark Tapley** with “Misty stags” (see left). This is a powerful, positive image that catches some really nice light and is effectively cropped.

Second place (\$150 cash prize plus framed print): **Pauline Pattullo** with “Almost two of a kind” (see below). This shot ticks a lot of boxes – two healthy stags on nice pasture and very well composed.



Third place (\$100 cash prize plus framed print): **Nic Bishop** with “Just weaned” (see above). This is a nice study of a mob of weaners contemplating their next life stage and wondering where mum got to.

People’s choice (wine pack): **Mark Tapley** with “Great results”

Highly commended:

- Angela McIntyre: “Hmmm”
- Denise Pawsey (2017 winner): “Now that I have your attention”
- Gail Simons: “Life’s little miracle”
- Glenys Travers: “Proud dad”
- Mike Wilkins: “Hey good looking”
- Photos will be published in upcoming issues of *Deer Industry News*. To see a gallery of the winners, visit: deernz.org/MSD-photo-comp-results ■

Big day out in the Rangitata Valley

by Phil Stewart, *Deer Industry News* Editor

As we wound uphill beyond Peel Forest and towards the Rangitata Valley, the signs didn't look promising. A thick fog blanketed the scenery and it looked as though the valley – one translation is “day of lowering clouds” – might live up to its name. But as the buses carrying about 100 conference guests pulled over at the first viewpoint the clouds parted and we were treated to a stunning South Canterbury autumn day.

THE FIELD TRIP was a perfect complement to the two days of intense and high-energy learning we'd had at the deer industry conference at the Caroline Bay Hall in Timaru. Hosted by the South Canterbury/North Otago Branch of NZDFA and organised by Murray Coutts and Kris Orange, the day went without a hitch. Branch Chair Graham Peck, Johnny Acland, Wayne Pawsey and their associates, right through to Neil Campbell who gamely towed the Portaloo in the wake of the buses, did a sterling job.

South Canterbury stakes a claim as industry heartland, and it was hard to disagree as we threaded our way through some of the best known deer farms in the country.

An early highlight was the massive \$115m Rangitata South Irrigation Scheme, built and funded by Waimate's Gary Rooney through his company Rooney Earthmoving (Rooney Farms is incidentally now the country's second-biggest deer farmer after Landcorp). It's New Zealand's biggest purpose-built irrigation storage facility.

Construction for the scheme started in 2011 and it reached capacity for the first time in 2014. The scheme's seven ponds can hold up to 16.5 million cubic metres of water and service 34 farms, covering an irrigated area of 15,600 hectares.

Our commentators introduced us to many of the region's farms en route, along with their colourful histories, and it was clear that both venison and velvet production is fully supported here.



Murray Coutts, Wayne Pawsey and Johnny Acland shared some of the Valley's rich history.

At Peel Forest Estate (where our tour had a brief stop), nearly 4,000 stags are velvetted, producing 18 tonnes last season. The half-million dollar deer shed (opened in 2012) has a 4-tonne

freezer capacity. Velvetting is done 7 days a week during the season, going from 5.30am to 3.00pm most days. Peel Forest puts 2,400 hinds to the stag, plus commercials, and sells velvet and trophy sires as well as its terminal venison B11 stags and maternal sires.

Near neighbours, Rupert Red Deer, run their velvet-based operation on two farms 5km apart, currently velvetting 700 stags and producing 5 tonnes last season.

Michael and Des Nolan breed and finish on two farms, putting elk bulls over hybrid hinds, with yearlings killing out at an impressive 70kg+.

Evan and Victoria Thatcher breed and finish for venison, also on two farms, putting B11 stags over red hinds.

We also passed Johnny and Rose Acland's Mount Peel Station, which has another of the better known deer operations flanking the Rangitata River (see *Deer Industry News* August/September 2017). Johnny explained it's a long (18km), narrow farm, with the eastern end (rainfall 630mm) affected by the rain shadow. Settled by the family in the 1850s, Mount Peel has been through tenure review and is now 5,500 hectares (4,000 effective). Deer feature strongly in the integrated sheep/beef/deer/dairy grazing operation.

There are currently 2,500 hinds, 1,300 velvet stags and 2,200 weaners. The hinds spend 90 percent of their time on the tussock, Johnny said (they are brought down to the paddocks for mating). The top weaners were already at 77kg, which he is happy with.

We then swung past Whiterock Station, which became well known in the deer industry as a highly successful Focus Farm, managed by Ross and Sally Stevens. The Stevenses developed the deer breeding and finishing operation on Whiterock over 10–15 years. About two-thirds of the property is now deer fenced and



Our reliable travelling companion.

they achieve excellent results, including kill weights of 57kg and 95.5 percent fawning (through the shed). The station has recently been sold to Rooney Farms.

Biosecurity matters

The Rangitata River is known for more than its scenery and historic stations. The farming community has been instrumental in efforts to protect the river environment, in a great example of locals and agencies working together for a common cause.

The Upper Rangitata Gorge Landcare Group works with DOC, Fish & Game and Land Information New Zealand and other catchment users to help keep on top of broom, gorse and other woody weeds like wilding pines.

The braided river is a sensitive environment and the group is helping preserve valuable nesting habitat. Sally Stevens, formerly of Whiterock Station, was active in the group's efforts to protect the Rangitata Gorge and upper river from the invasive alga, *didymo*.

Also part of Rooney Farms is neighbouring Stew Point Station (which featured on the cover of our June 2017 issue), managed by Wayne and Denise Pawsey. The 3,257-hectare farm is a breeding unit, with 1,590 hinds including R2s going to the stag. Progeny are finished at the Taiko block near Timaru.

Craig Feaver and Jan Taylor's Rata Peaks Station is a mixed velvet, low-cost breeding and finishing operation, while Donald Aubrey's Ben McLeod Station is known for its trophy stags, chamois and tahr hunting.



The field day traversed South Canterbury's deer farming heartland.

Also featuring deer is Forest Creek and the Tui Stations, totalling 3,800 hectares and managed by Riki and Sally Sinclair. The Stations were bought from the Prouting family (see below) by the owners of Fairlight Station, Canadians Mari Hill Harpur and Douglas Harpur. It's a mainly sheep and beef operation but also has 1,800 hectares of Douglas fir. There are currently 480 velvet stags, which are run on the higher tussock country. Replacements come from Fairlight Station.

Mesopotamia Station

Our destination for the day was Mesopotamia Station, where we were welcomed by owners Malcolm and Sue Prouting, the third



Malcolm and Sue Prouting.

generation of Proutings on the 6,000-hectare freehold station (2,500 hectares developed). (Rusty Andrews and the trusty Silver Fern Farms barbecue were also on hand to feed the guests.)

Malcolm's grandfather MV Prouting (also Malcolm) took over Mesopotamia as a young man in 1943, after having worked there for a few years. About 20,000 hectares of the original area was relinquished to the public estate in 2008 under tenure review, although the number of stock units on the remaining land has actually increased since then.

Malcolm's family moved onto the property in 1982 following MV Prouting's death. Malcolm's father Laurie set about draining much of the swampy front country that now supports a very productive enterprise. The 1950s Korean war wool boom was a particularly prosperous time for the station, and helped pay for much of its development.

Deer farming, now managed by Sue Prouting, started early at the station. Laurie was a helicopter pilot and the family started to grow the deer side of the business from the 1980s. Deer have been in Malcolm's life right from childhood. He has vivid memories of his first experience with deer was as a five-year-old helping his father getting deer out of the traps. He said a big deer trap up behind the Sinclair Range (one of several on the station) once snared 70 in one night – the animals were driven through the snow by helicopter to the yards. Poachers sometimes got to the traps before they did, Malcolm recalled.

He said the Aclands, Hoods, Bob Swann and vet Noel Beatson were all a great help as they established their deer farm.

As well as a large Merino flock and Angus herd, Mesopotamia Station runs 1,100 red hinds, 300 R2s (hinds and stags), 860 velvetting stags (4 tonnes of velvet) and 330 weaners (hinds and stags). Between 800–900 weaners are sold each year, with 300 replacements retained.



Visitors enjoyed stunning scenery at Mesopotamia Station.

continued on page 34

Rangitata: continued

Hinds calve on a native hill block and move onto lucerne – there are eight paddocks totalling 200 hectares – until weaning. The good feed may well be one reason they have lifted weaning weights from an average of 50kg to 58kg, “including fluffies”.

The young deer at Mesopotamia are run on a plantain rotation and then crop in winter. The stags are on grass paddocks at velvetting, moving onto big blocks, where some areas are sown in rape or plantain, after regrowth is cut. They are also wintered on crop. Palm kernel, onions and pea vine are bought in as needed for dry spells, while red clover and lucerne baleage and silage are made on the farm.

The deer numbers are well up on pre-tenure review levels. Malcolm said that although they don’t scan to monitor progress, they get calving rates of 95–97 percent.

The station has consent to irrigate up to 500 hectares, with the first pivot going up in 2016. So far just 22 hectares are covered, but this will soon expand to 60 hectares. A dam stores up to 20,000 m³ (currently 12 days’ supply) with an additional 100,000 m³ capacity planned. Malcolm said their consent only allows them to take

water when the river is running at flood levels of 130 m³/sec, so storage is important. He said the floodwater can be tricky to work with and the intake has been wiped out several times. Some of the consented area is uphill from the water but they are hoping to run a small power unit on one of the streams to pump the water up.

Malcolm said they were regularly talking to agencies like DOC, Environment Canterbury and Fish & Game on environmental issues. The valley is also on the Te Araroa trail, so there is a lot of tourist traffic which does increase the biosecurity risk from didymo, giardia and so on. While the trekkers probably don’t contribute much, hunters are a different story and these are now a mainstay of the station’s helicopter and tourism business. About 500 tahr, introduced by Laurie Prouting, are now a big attraction on the 480-hectare hunting block.

The futuristic looking MD Notar helicopter flown by Malcolm drops hunters onto their hunting blocks but also does an increasing amount of tourist flights – in fact he generously took several loads of guests for a spin after lunch. (Malcolm bought the helicopter enterprise, Station Air, from his father in 2017.)

The shape of things to come

by Phil Stewart, *Deer Industry News* Editor

While things are looking rosy for the deer industry, we aren’t immune from the effects of the fourth industrial revolution that’s sweeping the world. Business futurist and innovation expert Craig Rispin captivated guests at the deer industry conference with a quick-fire rundown on the innovations that are reshaping society and disrupting businesses.

HE SAID WE live in an age of paradoxes where two opposites can be true at once. While there were great risks to business, there were also great opportunities. And while technology dominates our lives, there is a growing appetite for natural products and experiences, he said. And for the meat industry we have the prospect of artificial meats becoming cheaper than the real thing by 2035, while demand for naturally grown meats continues to strengthen.

Rispi, who is US-raised but has a Kiwi father, said the past 200 years had seen four distinct revolutions: steam, then electricity, then computers and communications, and now artificial intelligence and genetic technologies like gene editing.

Like Rabobank’s Blake Holgate, Rispi emphasised the importance of our social licence to operate.

He said one billion people around the world had been lifted into the middle classes over the past 20 years. “There will be another one billion over the next 10 years. These people will be able to afford your venison!”

Rispi catalogued some of the cutting edge changes currently underway, including:

- genetically modified *E. coli* being used to store data
- scanners and sensors getting cheaper, faster, more powerful and smaller thanks to Moore’s law of computing
- molecular scanners that can quickly check food products to verify they are true to label by sending the data for analysis in the cloud and returning a result to your smartphone



Craig Rispi: Growing middle class around the world will have a taste for NZ venison.

- robots taking over as baristas
- San Francisco pizza startup Zume, using a “doughbot” to take over the tedious job of pressing pizza dough
- top chefs recording their techniques so they can be automated for use in mass-catering situations such as cruise ships.

New Zealand won’t be immune from the rapid uptake of new technologies like these, Rispi said, but they would be applied to our own challenges, such as the goal of becoming carbon neutral by 2050. ■



Malcolm Prouting generously took several loads of visitors on a scenic flight in the Station Air helicopter.

- Sponsors for the field day included Silver Fern Farms (lunch), XCM (beanies), Rabobank (water) and Downlands Deer (transport and drinks).

Live capture pioneer recalls early days

Bryan Bassett-Smith was involved in the very early days of live capture in South Canterbury and entertained guests with tales of the experiences he'd survived.

He worked with the chemist developer of the Paxarms tranquilliser gun, obtaining a pistol to power it and chasing a few dog tucker sheep on the back of a tractor “to get the feel of it” before graduating to helicopters.

Basset-Smith said getting a narcotics licence in those early days was a mere formality, but they were dealing with pretty hazardous drugs such as fentanyl citrate and Rompun “with absolutely no training”. Their safety protocol (in the case of accidental injection) consisted of jabbing the recipient with the antagonist drug and getting them to hospital ASAP. That plan that was indeed put into practice for Donald Waters when he received an accidental shot in the leg and was flown, unconscious, to Hanmer Hospital (he recovered).

He recalled an expedition with Bob Swann in the 1970s in the Fairlie basin. “We got onto a beautiful big stag after about three minutes. We got a couple of darts into him and brought him back – that was Bob’s ‘Big Dad’. It was the passion that a few of us had for keeping these animals alive that led to what we have today.”

Laurie Prouting had been the mastermind behind the deer capture using traps on Mesopotamia, Bassett-Smith said. “Some real wisdom went into that.”

They learned as they went and had some anxious moments with over-pressurised tranquilliser darts exploding inside the helicopter bubble. “We had to learn by trial and error – it was a wonderful time to be a young New Zealander. It was also a tribute to the tenacity of people like Tim Wallis who really went out on a limb to start the industry.”

He recalled a particularly hairy trip with Wallis on a windy day when they were returning with a very big stag slung below the helicopter by its antlers. “It was too big for the catching bag – they survived [this mode of transport] with no ill effects at all.” They flew down the valley “semi out of control” until a strong cross wind hit the chopper dislodging the bubble. “The bubble flew out into space, but somehow we survived!”

He said it was “a wonderful time to be alive and stay alive. What a great industry you have now. You’ve made a secure place for it in New Zealand.”

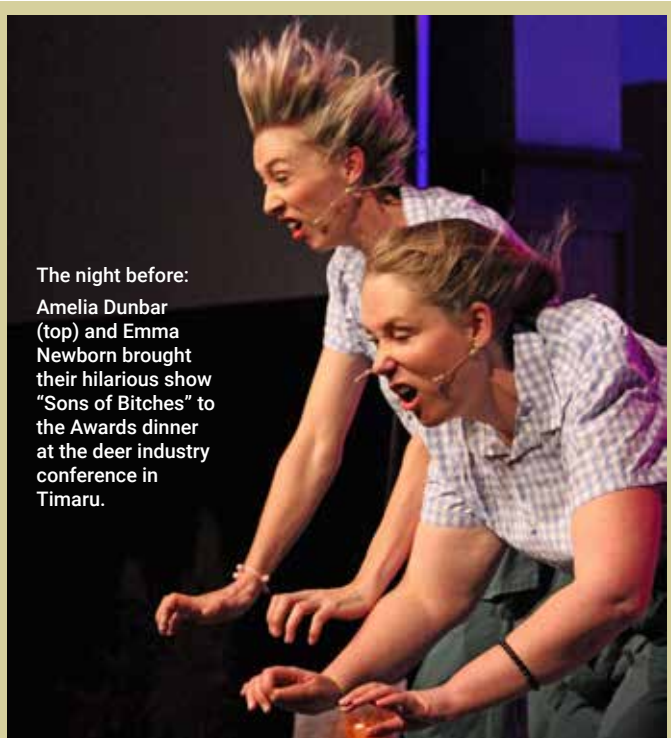
Many captured wild deer were killed because of nutritional stress and shock, he said. “Deer were considered to be tough animals, but once you brought them into captivity, things changed.”



Bryan Basset-Smith had some great tales to tell.

Bassett-Smith had been a hunter in the North Island in the 1970s when he heard of the capture work being done in the South Island. “I thought, let’s see what we can do about keeping these animals alive. It became a real passion.”

He started the Hadlow Game Park near Timaru at the same time and following that turned to deer farming in the 1980s at Rockpool farm in Totara Valley, until the late 1990s. Bassett-Smith was the first in Canterbury to cross red and wapiti. “If you put a wapiti bull over a red-wapiti hybrid you get beautiful progeny.” ■



The night before:
Amelia Dunbar (top) and Emma Newborn brought their hilarious show “Sons of Bitches” to the Awards dinner at the deer industry conference in Timaru.

First Antipocurean Series chefs visit

by Alison Spencer, *Deer Industry News* writer

Venison was included in the whistle-stop itinerary for the first batch of Alliance Group's first *Antipocurean Series* group of chefs and media in April.



Silvio Armani (left) and Renee Miller (centre) working with the Chillingworth Road restaurant team.

CHEFS FROM THE United Kingdom, Hong Kong and New Zealand, along with international food media, toured South Island farms and visited premium restaurants as part of the *Antipocurean Series*, as guests of Alliance Group.

UK chefs Michael Wignall, Renee Miller and Simon Hulstone and Hong Kong chefs Jim Lofdahl and Silvio Armani were accompanied by one of the world's leading food bloggers, Dubai-based Zowie Bowker, who has 46,000 Instagram followers, and Wilson Fok of Hong Kong's *Tatler Dining*.

The chefs' skills were put to the test at two public events at Chillingworth Road restaurant in Christchurch and at Jack's Point restaurant near Queenstown. Over both evenings, guests experienced a selection of products in Alliance's range, including its new foodservice offering, Pure South Handpicked Venison.

The group visited Whiterock Station in the Rangitata Gorge, Minaret Station in Wanaka – both of which run deer – and Godley Peaks Station near Lake Tekapo, which runs beef and merino sheep.

Alliance Group general manager marketing Peter Russell came up with the *Antipocurean* concept – based on epicureans with knowledge of the Antipodean passion for food production – drawing on his experience in wine industry marketing.

"The wine industry is a great exemplar of how product differentiation can be embraced and commodity avoided. I couldn't understand why New Zealand dealt with a scarce resource like lamb but treats it like a commodity," he explains.

Food reputation starts with the foodservice sector, he believes, which then acts as an influencer for retail. To his horror, research

showed most in that sector had no idea how New Zealand's red meats were grown and produced.

The Alliance marketing strategy is now heavily directed towards foodservice, which in turn supports the corporate strategy of becoming a food company.

"We believe building 'evangelists' is the best way to start to develop a premium brand, targeting influencers first, then retail. It's a mistake to start with retail if you wish to influence change and reappraisal."

The UK *Antipocurean* chefs, in particular, didn't know how venison was farmed. Two things surprised them most: landscape and scale, says Russell.

"Holy mackerel, they had no idea how much the landscape and terrain changed between one farm and another and that it was all stunning!"

The size of the properties, ranging between 500–22,000 hectares, was another talking point.

"Our scale blew them away too. However, they could see that it was not holding us back in terms of sustainability and that there was real respect for the land and an innate understanding of the livestock."



Alliance is starting to build an alumni of *Antipocurean Series* chefs and food writers from around the world.



Jonathan Wallis (right) Minaret Station, Wanaka, was on hand to discuss deer, one of the main parts of their business, with the group and also to introduce them to Te Mana Lamb.

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NZDFA Annual General Meeting

by Phil Stewart, *Deer Industry News* Editor

The NZDFA's 43rd Annual General Meeting in Timaru attracted a good turnout and business was completed tidily in just on an hour.

OUTGOING NZDFA CHAIR David Morgan presented his report in highlight form. (To see the full report visit <https://deernz.org/publications>.) In additional comments, he said it was pleasing to see the large number of young deer farmers coming to regional workshops recently. He added that it is important to differentiate the activities of NZDFA – for example, the Next Generation programme – from the on-farm work being done under Passion2Profit.

He said the Deer Facts were proving to be a valuable tool for passing on information.

The value of the policy work being done by DINZ Environmental Stewardship Manager, Lindsay Fung, couldn't be overstated, Morgan said. "I encourage all deer farmers to do a Farm Environment Plan. It's not a lot to ask and it doesn't take much to do a basic plan. It's an intergenerational process."

Morgan said NZDFA and DINZ work well together and had special praise for the producer management team of Cenwynn Philip and Tony Pearse.

He said NZDFA strives to deliver good value to its members and noted the decline in membership has been arrested. "The association represents about 1250 people from around 1500 farms."

Former NZDFA Chair and now Environment Southland regional councillor, David Stevens, seconded adoption of Morgan's report.

He said it had been another year of excellent returns and it was to be hoped these were sustainable. "We rely on the integrity of the venison marketers. It's not been easy for them to balance supply and demand." Stevens congratulated the companies for offering forward contracts, benefiting both new and existing suppliers.

He also had positive words for the National Velvetting Standards Body and NZDFA for the way they had negotiated their way through the changes necessitated by the Regulated Control Scheme. "We must have the highest standards of welfare and hygiene," he said.

The annual Branch Chairs' meeting in Wellington was a

great opportunity for the NZDFA to engage with DINZ. The fifth annual Next Generation conference at Invermay last year was also continuing the Association's valuable work and Stevens was pleased to see the latest group of young people to benefit from the Big Deer Tour. "I'd like to think these young people will come through and become DFA members."

Stevens said the growing pressure to improve environmental performance was the biggest challenge to the deer industry since the battles for the right to farm deer in the 1970s and the spread of bovine Tb in the 1980s.

He endorsed David Morgan's praise for Lindsay Fung's work with NZDFA supporting branches making submissions on draft regional plans. The Environmental Management Code of Practice being launched the next day was a great example of deer industry leadership, he added. "The deer industry is renowned as a leader. We need to do the same with environmental management."

Finance

Executive Committee member Justin Stevens commented on the financial report for 2017/18 (see NZDFA 2017/18 Annual Report for details). He noted the following highlights:

- A small \$362 operating surplus against a break-even budget, with a net deficit of \$845 after tax on interest earned.
- A welcome \$4,000 margin in subscription income over budget and an end to the slow erosion in membership numbers previously.
- Special thanks to Rural Livestock and PGG Wrightson for helping sponsor the Next Generation programme.
- Strong branch support (\$24,000 paid in 2017/18) for the completion of the Agmardt parasite research project and with national support \$40,000 in all.
- Reserves declined only very slightly to \$170,552.
- \$10,000 will be committed from reserves this year to support succession planning workshops through the Sustainable

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Antipocurean: continued

On Whiterock Station, the group learned the paddock design and fencing was directionally arranged with deep understanding of deer behaviour, recognising they have a natural tendency to run uphill and often flow in a circular fashion.

"They had organised much of the paddock set up around that, so the animals were peaceful and calm, minimising stress and avoiding high pH levels, which would of course impact on venison quality."

Feedback from the group has been excellent with all loving the

venison, says Russell. Several of the chefs are already including Pure South Handpicked Venison, the new branding for the Alliance foodservice venison range, on their menus, alongside SILERE alpine origin merino lamb and Te Mana Lamb. At the time of writing, items had already appeared at the bloggers' websites and been prepared for print.

The success of the first group is just the start, with a second tour including chefs and media from the United Kingdom, United States, Germany and China already in planning for next year. ■

DFA AGM: continued

Farming Fund programme that's been awarded.

- The 2018/19 budget is "tight", allowing for a \$60 surplus and a breakeven philosophy.

Branch remit: OVERSEER

There was just one branch remit this year, put forward by the Southland branch:

The Southland Branch of NZDFA asks that DINZ seek a review from OVERSEER of the deer-specific sections of OVERSEER which relate to deer wallowing and fence pacing.

The review should consider whether there are better ways to input data around the scale, risks and impacts of wallowing and fence pacing and whether the associated nutrient losses are accurately reported.

Speaking in support of the remit, John Somerville (Southland DFA) said the OVERSEER questions about wallowing and fence pacing were "Yes/No", so it was either declared as a problem or not. He said the current system made no allowance for indicating the scale of the problem – whether it affected the whole farm or just a part of it. It didn't record the scale or context of the risks, or acknowledge the impact of mitigation work.

"It is likely that OVERSEER overestimates [phosphorus] loss on deer farms, as a result of the current 'one size fits all' approach."

David Stevens said that with the way the deer wallowing and fence pacing questions were framed at the moment, "whether you tick 'yes' or 'no', either way you're probably not telling the entire truth". He said it was an important remit in this respect.

In discussion, Lindsay Fung said there weren't indications that any regional councils were going to be using OVERSEER as part of a framework to regulate phosphorus loss rates, although it was involved in setting limits on nitrogen losses.

"Getting OVERSEER to incorporate any additions is likely to be a rather formal and lengthy process. We would probably need to provide co-funding to get this included in the workplan of OVERSEER Management Ltd."

Tony Pearse noted that commissioning research to support such a change to OVERSEER could require a considerable investment.

Justin Stevens noted that the relative risk of deer behaviour needs to be factored in somehow. "A wallow on a slope next to a creek is going to do a lot more harm than a wallow in a depression with no connection to a waterway."

The remit was **carried** on a voice vote.

OVERSEER in Budget

In the Budget announced two days after this meeting, the Government announced it was committing \$5 million over four years to enhance OVERSEER. The extra funding is designed to enable quicker adoption of environmentally friendly practices and the inclusion of a wider range of land types and farming systems.

Board appointment

William Oliver retires by rotation from the DINZ Board and is the sole nominee for a further three-year term. He will meet with the NZDFA Selection and Appointments Panel before an appointment is confirmed.

Oliver spoke briefly to the AGM, noting that a lot of good work

had been done before his accession to the board. He said the current strategy and work plans are partly behind the industry's confidence and success.

As governance roles go, Oliver said being a DINZ board member involved a complex range of issues. At a typical meeting the topics on the table ranged from environment to biosecurity, farm issues, transport, market access, animal health and much more.

"Dan [Coup] and his executive team deal with these complexities every day."

He said the industry strategy had been refreshed, with discussion centred on how to build on recent successes.

"We tweaked a couple of things with a bit more focus on the environment."

Oliver said the NZDFA Branch Chairs' meeting was a great opportunity for the board to hear first hand from the industry. He was also pleased to see the work that is going into succession planning.

Elections

As noted in the previous *Deer Industry News*, current members of the NZDFA Executive Committee and Selection and Appointment Panel were reappointed unopposed. For the record they are:

Executive Committee

Grant Charteris, North Island*

John Somerville, Member at Large*

Justin Stevens, South Island

David Morgan, Member at Large

Selection and Appointment Panel

Paddy Boyd, South Island*

Leith Chick, Member at Large*

Donald Whyte, North Island

Brian Russell, Member at Large

*Retired by rotation, reappointed unopposed.

A vote of thanks to David Morgan

David Morgan has stepped down as Executive Committee Chair after two years in the role. Taking up the position is **John Somerville**, Southland. John moved a vote of thanks to David for his contribution. "No-one is more passionate and enthusiastic than David. He's been a specially big supporter of both the Next Generation programme and the industry's environmental work." ■



John Somerville has taken up the reins as Chair of the NZDFA Executive Committee. Photo: Trevor Walton.

Milking deer: Mapping the unknown

by Alison Spencer, *Deer Industry News* writer

A partnership exploring the potential for deer milk is making gains in deer husbandry and product knowledge.



Hey! Where are you taking my milk? A consignment of frozen deer milk is ready for refrigerated transport to the FoodHQ dryer in Palmerston North.

“IT’S REALLY BEEN a journey into the unknown,” says Pāmu Farms of New Zealand (formerly Landcorp) innovation, environment and technology general manager Rob Ford, one of the driving forces behind the initiative.

“Our future is in higher value, lower volume, so Pāmu has been investing in changing some farms to produce sheep milk and working with partners on deer milk plus much more.”

The project to date has been focused on harvesting – finding out how to milk the deer sustainably, learning about the composition of the milk, assessing consumer needs and then developing and aligning what products it might best be suited to.

Pāmu has been working closely in partnership with Peter and Sharon McIntyre who run around 1,800–2,000 red deer at Benio, their 190-hectare farm property near Gore in Southland.

“Peter and Sharon have been pivotal in the collaboration into this new and exciting product. Their commitment over the past three seasons in something that has been more of a research and development project has been quite outstanding,” says Ford.

A highlight for this year, he says, has been the development and approval of a Risk Management Plan (RMP) by the Ministry for Primary Industries, enabling export opportunities to be explored.

The hinds are milked every morning and afternoon for four to five months, between November and February–March, Peter McIntyre explains. Each milking takes around 2.5 hours from paddock to clean-up and involves ten deer being milked together, in single stalls, in a well-lit, fully MPI-approved dairy shed. Regular dairying equipment has been adapted for deer. The animals

adapted quite quickly and happily to the new regime.

The hinds are not trained but are fed in the paddocks before milking and in the stalls, and are happy to come in and be milked, says McIntyre. “Some like a pat or a scratch before entering the stalls to be milked; some like to be first, others later – they behave a lot like dairy cows.”

McIntyre’s daughter Rhiannon heads the hand-rearing of the fawns, which is “a lot of work” he says. However, they have also found their behaviour changes quite significantly. “They are really quite friendly,” he says.

Per-deer yield fluctuates from day to day and milk is frozen down in a blast freezer on the farm, he explains. This is sent to the FoodHQ spray dryer at Massey University in Palmerston North, where it is thawed before drying.

There, Massey scientists have been evaluating the deer milk powder composition, which has been found to be higher in fat than other milks. Earlier, University of Otago research had shown it contained compounds with potential to boost human immune systems.

“This has been a highly collaborative process working with many parties across the industry. The success to date could not have been achieved without them,” says Ford.



STOP PRESS! All the hard work was recognised with a win for Pāmu in the 2018 Fieldays Grassroots Established category of the 2018 Fieldays Innovation Awards. “Significant, world-first research and intellectual property has been developed from behind the farm-gate through to a finished RMP-approved product which Pāmu Foods can now use to assess market demand and price tolerance,” the judges noted. The novel product was also on display at the Innovation Centre.

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Venison hero in Restaurant Awards

by Alison Spencer, *Deer Industry News* writer

Venison was most definitely the hero of the 2018 Silver Fern Farms Restaurant Awards, scooping the supreme award and appearing in four of the seven award-winning dishes.

AARON BALLANTYNE, HEAD chef and now partner at Hopgoods & Co restaurant in Nelson, received the supreme accolade as Chef of the Year, as well as winning the Best Venison Dish and the inaugural Restaurant of the Year categories for his dish – Silver Fern Farms venison, chestnut polenta, caramelised celeriac, fig and wild mushroom tapenade. It was the first time a venison dish, and a South Island chef and restaurant have won the awards since they began in 2013.

His dish was described by the judges as, “total harmony on a plate”. The generous portion of tenderloin and a crumbed slow-cooked neck croquette were cooked to perfection and the meat was the hero of the dish, they raved. They also loved the way the dish captured the season, with colours of autumn on the plate, “combined with a pop of gold from golden beetroot”.

Ballantyne, who has worked at Hopgoods for the past decade, said he wanted to use the different cuts of venison in his dish “to show off different textures, cooking methods and flavours”. He was drawing on previous culinary experience gained from completing training in Wellington, before working in Japan and Australia, then joining luxury Queenstown lodges, when he first returned home in



Pope-Moody's winning dish – Silver Fern Farms venison short loin, fig, cauliflower and goat curd puree, beetroot, beet kraut, beetroot tile and sorrel.

Deer milk: continued

Based on its experience with sheep milk, Pāmu's marketing team is now working with Massey on potential new products. These include sachets of milk powder for use in creamy desserts such as panacotta, which have been successfully tested with a number of high-end chefs in Auckland, says Ford. Another use being explored is skin care products.

“We're doing a deep dive into consumer insights now,” says Ford. Results are expected later this year, though early indications are that there is consumer interest.

Now in their third season of deer milking, the McIntyres say it has been interesting, but still experimental. “You've got to try these things and see where it goes,” says McIntyre.

Challenges faced all the way through the project required solutions. Basic dairy equipment had to be adapted to deer specific needs. Also, because milk volumes were higher than anticipated, more freezing space was needed in a hurry.

“We now have the equipment sorted out and freezers in place to accommodate the volume,” says McIntyre.

Many people have helped, from modifying dairy plant, assistance with cleaning procedures for high-solid high-fat milk to frozen transport, he says.

“Our vets have been involved right through, monitoring health and welfare of fawns and hinds. It has taken a team to get this

working well on farm.

“Working with Pāmu gives us an opportunity to be involved with the product beyond the farm gate – something all farmers aspire to. On-farm has been technically challenging at times, but off-farm challenges are at least as great, to get it to the product stage. That is also the exciting part, when you finally have consumers for a new product.”

“Our wonderful staff have really loved their interactions with the deer. Some want to go to full-time careers in the deer industry,” says McIntyre.

“If the commercial opportunity exists and scale is required, we are very keen to work collectively with any other deer milkers,” says Ford. ■



Rob Ford, Pāmu Farms New Zealand's innovation, environment and technology general manager.

the 2000s.

His dish was one of four finalists in the venison category of the prestigious annual culinary awards.

The co-head judges, acclaimed chef Geoff Scott and founding editor of *Dish* magazine Catherine Bell, said the judges were also particularly impressed with the number of entries in the Emerging Chef of the Year section which, alongside Restaurant of the Year, was a new award for 2018.

Venison was the immediate first choice for hero of Patrick Pope-Moody's plate as the apprentice chef at Chameleon Restaurant in Wellington and New Entrant category winner is a keen hunter. His dish, Silver Fern Farms venison short loin, fig, cauliflower and goat curd puree, beetroot, beet kraut, beetroot tile and sorrel, showed off his passion for using ingredients with bright, sweet autumn flavours to complement the meat and showcased his skills, learned under head chef Paul Limacher, he says.



Silver Fern Farms Chef of the Year for 2018 is Aaron Ballantyne of Hopgoods & Co in Nelson (inset) and the pretty dish that earned its creator three categories in this year's Silver Fern Farms Restaurant Awards – the supreme title Chef of the Year, Best Venison Dish and Restaurant of the Year: Silver Fern Farms venison, chestnut polenta, caramelised celeriac, fig and wild mushroom tapenade.



Watch out for this one too: Patrick Pope-Moody, Emerging Chef of the Year and protégée of Paul Limacher at Wellington's Chameleon Restaurant.

"It was hard to fault," the judges said, adding the dish had perfectly balanced flavours and demonstrated excellent meat cookery skills.

Judging started in February and the team had their work cut out trimming down the 70 entries from all over New Zealand to just 12 finalists. All of the finalist restaurants were revisited by the co-head judges in May before the seven award winners were confirmed.

The three remaining categories, were Best Lamb Dish, won by Mat McLean of Palate Restaurant in Hamilton, Best Beef Dish (Paul Limacher, Chameleon Restaurant, Wellington) and Regional Restaurant of the Year (Logan Coath at Archive Bar & Bistro in Mudrick, Waiheke Island).

Silver Fern Farms' marketing manager foodservice, Bernie de Bono, says she was delighted with the standard of entries this year and also the even mix of species in the dishes.

"We loved the way the winning chefs demonstrated their skills to make the meat the hero of their dishes and how they embraced the autumn produce so creatively to create outstanding cuisine," she said.

The other three finalists in the 2018 Silver Fern Farms Restaurant Award's Venison Award were:

- Mills Reef Winery, Tauranga – Anthony Lawler, head chef, Silver Fern Farms venison strip-loin, textures of beets, horseradish yoghurt, herbed goats curd
- Amayjen – The Restaurant, Feilding – Andrew May, head chef, Silver Fern Farms tenderloin of venison, burnt onion ash, venison shank and potato pie, roasted beetroots, shallot petals, cranberry gel, venison jus
- Noble Rot Wine Bar, Wellington – Punit D'Souza, head chef, Silver Fern Farms venison Denver leg, osso bucco, parsnip, pear, vanilla onions, preserved stone fruit, confit carrot.

You can try any of the award-winning and finalists' dishes at their restaurants until the end of July. ■

Good ideas flow at Puketira Deer regional workshop



by Phil Stewart, *Deer Industry News* Editor

There was lively discussion on environmental enhancement on 18 April when the Matthews family welcomed visitors to a P2P Regional Workshop on their North Canterbury farm, Puketira Deer.

THE EVENT, ATTENDED by about 35 local deer farmers, was supported by the Canterbury West Coast branch of NZDFA and led by James Hoban, who is also facilitator for the North Canterbury Advance Party. There was plenty of environmental expertise on hand, including Hoban as well as Environment Canterbury (ECan) Senior Land Management Adviser Michael Bennett, NZ Landcare Trust's Janet Gregory, and DINZ Environmental Stewardship Manager, Lindsay Fung.

Lyndon Matthews said deer had been farmed on the 267-hectare property for the past 27 years and will soon become the only stock class. Two hundred hectares are in deer and the remaining 60 effective hectares are currently being deer fenced.

It's pleasant, easy rolling country but has more than its share of challenges. The 630mm average rainfall is highly variable year to year and up until early 2017 the region had endured several years of almost continuous drought. Southerly storms can spring up suddenly and catch out young stock in exposed paddocks. Wind erosion (Matthews mitigates this by direct drilling) is a constant risk. Along with the rest of the region, the farm got a good battering from the 2016 Kaikoura earthquake.

The hind herd currently stands at 450 (585 mated this autumn), with plans to bring this up to 750 over the next 2–3 years once the last of the Longdown Composite sheep flock is phased out. They've been using genetics from Deer Improvement to breed sires and replacements for the past 12 years.

The farm straddles two catchment nutrient zones: Hurunui and Waipara.

Get in the Zone

Michael Bennett said ECan emphasises advice rather than enforcement, and he urged deer farmers to get involved in their Zone Committees. "The social interaction is important."

He explained that the consenting threshold for farms in Canterbury is 50 hectares of irrigation or more than 10 percent of the land area used for grazing cattle on winter crops. He said most of those present would be operating as a permitted activity below this threshold. James Hoban commented that in these cases all that is required is a Farm Environment Plan (FEP). Bennett said the FEP is at the core of ECan's approach. "If you're stressed about local rules, talk to people on your Zone Committee."

Lindsay Fung noted that those thresholds are part of the

overarching Canterbury Land and Water Plan, and there will be variations between zones, another good reason to keep alert to local conditions. The Orari-Temuka-Opihi-Pareora (OTOP) Zone Committee in South Canterbury, for example, was proposing to require consents for deer farms of more than 50 hectares to manage the risk of phosphorus and sediment loss. Some pro-active but hurried discussion between the South Canterbury/North Otago branch of the DFA and the Zone Committee saw the emphasis change, however, and deer are now included in the winter crop grazing limit for cattle (20 hectares).

Fung said the Waimakariri catchment zone was looking to replicate some of the OTOP zone proposals, so there was potential for "spillover" of restrictions between areas.

Another issue of concern to farmers is the draft national stock exclusion regulations, which were developed just before last year's election. For deer, that meant implementation by 2025 on land up to 3° or 2030 for rolling hills (4–15°, intensive only). The draft acknowledges that permanent deer fencing is expensive and impractical in some landscapes and allows for "other approved measures" to be used.

Fung said these are "still on the table" but it was yet to be seen whether the new government would progress them. The definition of an ephemeral versus a permanent stream was another potentially contentious area.

He said that if a farmer couldn't meet the requirements of the stock exclusion regulations, the draft allowed for them to offer an alternative approach to achieve the same result (e.g. sediment traps).

Environment Southland had already adopted most of the draft regulations in its regional plan, but had allowed reasonably clear and pragmatic definitions of a waterway, Fung said.

Wetland success story

The wetland at Puketira has been a great illustration of how to build on what is already there. Lyndon Matthews said it used to be unfenced and sheep would wander through at their leisure. Crack willows also infested the area.

Today, for a setup cost of about \$6,500 (recycled posts, netting, digger for the willows and native plants) the wetland has been transformed into a healthy waterway where eels and the rare native mudfish can thrive.

Matthews said the water from the wetland flows into the Waipara Creek. His attention is now turning to the water upstream and reducing its nutrient and sediment loadings before it gets there.



Lyndon Matthews (left) and Michael Bennett (ECan) discuss the wetland at Puketira Deer.

Michael Bennett noted that it would cost hundreds of thousands of dollars to establish such a wetland from scratch, compared with the few thousand that this one cost. “It’s always better to leverage off what’s there.”

He said the steeper the banks for a wetland, the wider the buffer strip would need to be. Weed control could be an issue on wide buffer strips. “Grass provides a good filter for water flowing over the buffer strip,” he said.

Ripping out willows from a wetland with a digger could cause issues with sediment when water was flowing. “Talk to us first,” Bennett advised those thinking of enhancing a wetland on their farm.

Where a good wetland isn’t available to enhance, a series of small sediment traps can provide some filtering. Visitors were advised to allow some meandering in the water course so more fine sediment would be dropped. Stretches of open water exposed to the sun helped kill off any *E. coli*, although the same water could attract ducks, so it was a double-edged sword.

In general it was better to deal with issues like sediment as close as possible to the source, rather than well downstream. In the paddock itself, that could mean managing grazing practices, location of wallows and reducing behaviour like fence pacing. (Matthews said he learnt early on to stop this behaviour by avoiding having mobs in adjacent paddocks.)



Workshop attendees discuss options for rehabilitating the earthquake-damaged and formerly dry slope (lower right).

Broken slope

Matthews was interested to hear suggestions for a slope that had been damaged by the Kaikoura earthquake. It was now wet, and the broken surface was proving a magnet for deer, making it a classic “critical source area” for sediment and *E. coli*.

The area was not too far above a recently fenced-off gully, and the consensus was to shift the existing fence to include the damaged area with the gully and put in some water-friendly plants to stabilise the area.

Lack of water is often the biggest killer of new riparian plantings, so the wet slope would be reasonably easy to rehabilitate.

Silage pit

Matthews has removed a silage pit that was at risk of leaching into a stream. A new pit near the top of the farm was praised for its location and design. It has a large apron area in front and is well away from any waterways, allowing good drainage on the limestone soils*.

Waste had been a problem in the new pit when an air gap had formed along the edges between the stack and the cover. He’s now double-skinned the cover to protect the silage better, crowned it higher and rolled it more after the contractor had finished.

He had 330 hinds on the triticale silage for 80 days last year and 140 days the previous year. He’s planning to feed 350 hinds on it this winter.

*Limestone soils are not such a good bet for location of offal pits, as they don’t contain *E. coli* within the pit. Clay soils are best for offal pits.



The location and design of this silage pit at Puketira Deer attracted praise.

Puketira: continued



From left: Robb Kidd and Gus Martin (Duncan New Zealand), Lyndon Matthews, Millie Matthews, Eldon Matthews and award judge Janet Gregory (NZ Landcare Trust).

Crop paddock

Crops and slopes can be a challenge if you want to avoid sediment loss, but a rape paddock on a slope at Puketira Deer had successfully kept its soil within its boundaries thanks to a well-placed sediment trap at the base of the paddock. Matthews said about 45 centimetres of silt accumulated in the trap following a crop grazing last year.

Michael Bennett said it was a good idea to document your experience with crops like this over time to be able to show your council how you had mitigated the risks. He said concentrated livestock on a crop over a wet winter could leave a lot of nitrogen behind, and suggested another crop to follow could help absorb some of this.

“Cows on greenfeed on wet, sloping soils are the worst [for N losses] followed by male cattle, then deer and then sheep.” He said fodder beet tends to result in less N output through livestock, while brassicas caused less methane production.

Matthews said he had yet to try fodder beet. “We prefer moving the break once a week on kale, to once a day on fodder beet!”

He said the N losses for the whole farm according to OVERSEER® were 26kg/ha/yr for their “baseline” deer and sheep farm system. It was proposed to pull this back to 23kg/ha/yr in a deer-only system, largely by a big cut in losses for the Waipara (62 hectares) allocation zone. This would be achieved through changing the proportion of cropping in the two zones, with this predominantly being done on the Hurunui side in the proposed system.

- For a short video of farmer reactions to the Regional Workshop at Puketira Deer, visit: <https://bit.ly/2kXyNis> ■

Environment award presented

The Matthews family (photo above) received the Duncan New Zealand award for vision and innovation while mastering a demanding environment in the 2017 Deer Farmers Environmental Awards. Representatives from Duncan New Zealand were on hand to make the presentation at the Regional Workshop. The award is the latest in a string of honours for the environment-conscious family. Puketira Deer won the Environmental Canterbury Water Quality Award and the Beef+Lamb NZ Livestock award at the Canterbury Ballance Farm Environment Awards in 2017. It has also won deer industry environment awards in 2008 and 2012.

For Sale:

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All about feed at The Kowhais Regional Workshop



by Phil Stewart, *Deer Industry News* Editor

If you wanted to glimpse into the future of the deer industry, the South Canterbury/North Otago P2P Regional Workshop on 19 April at Tom and Samantha Macfarlane's property, The Kowhais, gave some pretty good pointers.

THE WORKSHOP ATTRACTED an excellent turnout of about 70, with a good mix of young farmers keen to learn and experienced people happy to share their knowledge. The day was facilitated by Justin Geary of NZ Farm Management and there was a clear focus on feeding, productivity and environment.

First, the property. It's 800 hectares (650 effective) of flats and rolling clay downs in Middle Valley Road, near Fairlie. It's summer dry with 800–900mm of rainfall per year and 180 hectares irrigated as part of the Opuha Water Limited scheme. (January and February are the tightest months.)

The Macfarlanes took over the partially deer-fenced property five years ago and have quickly completed the deer fencing to now cover 95 percent of the farm. It's an integrated livestock system with the balance tipping more strongly in favour of deer. Current stock policy is:

- 850 hinds to calve (up from 200 four years ago)
- 2,000 weaners finished (up from 1,400 2 years ago)
- 900 cattle (R1 and R2)
- 450 ewes (down from 2,550 5 years ago)
- 100 carry-over dairy cows.



Hinds and stags at The Kowhais: The breeding unit is maintained to help ensure a supply of weaners and to control genetic merit.

Tom Macfarlane said they would just as happily do all deer finishing but with weaners at a premium they need to breed at least some of their own. "It also gives us more control over the genetics," he added. About 700 hinds are taken through to two years of age, mated and then some of these are sold in fawn.

He said deer and cattle fit well together on the property. While the January–February pinch period is a challenge for the lactating hinds, the previous year's weaners are mostly gone by then, which takes off some pressure.

Currently they grow 85 hectares of winter feed, including:

- 10ha precision-sown swedes
- 15ha fodder beet – full cultivation
- 60ha fodder beet – precision direct drilled (30ha last year).

Macfarlane said that whatever the stock class, he would rather invest in high-quality feed grown on the property than relying on bought-in grain. "Once fed, [your investment] is gone!"

This led nicely into a workshop session on body condition scoring hinds and feeding.



The Regional Workshop was well attended.

BCS important

Everyone at the workshop agreed that hind body condition is important through lactation and leading up to weaning and mating. There's still some work to do getting people to match practice and principles, however. Even in this gathering of progressive and motivated people, only two hands in the room went up when Justin Geary asked who properly body condition scores (BCS) their hinds.

Tim Turner, farm manager at The Kowhais, said they monitor BCS both in the paddock and the shed, and it informs the timing of weaning. "If scores are lower than we'd like, we'll bring weaning

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The Kowhais: continued

forward,” he said.

(See deernz.org/deer-hub/feeding/feeding-deer/body-condition-score-chart for more on BCS and mating.)

Macfarlane said BCS is a great management tool that puts some numbers and discipline around planning feeding and weaning. He added that it’s best to start supplementary feeding before a hind starts to show signs of losing condition.

Justin Geary said BCS was a much better indicator of feed requirements than weight alone. “A weight of, say, 110kg does not mean the same for all hinds,” he said.

Feeding tips

- Dallas Newlands said three years ago his Advance Party group had advised starting supplementary feeding early (pre-Christmas). He said using palm kernel and then adding barley later they had boosted weaner weights by 5–6kg and scanning rates have lifted from 82 up to 98 percent.
- Neil Campbell advised making a habit of using supplementary grain every year, regardless of conditions. “It minimises stress and teaches the weaners about grain.” He noted that feed intake needs to go up to keep up with maintenance needs in winter cold spells.
- Kris Orange said the weaner hinds will remember the lesson about grain 12 months later.
- Martin Rupert said starting supplements a month before weaning was too late. “You need to start earlier.”
- Getting young deer on a pre-weaning supplement also helps them get used to being around people, Tim Turner said. He said a sample of 30 is weighed each time they come through the shed to see which types of feed are giving the best results. “We’re happy with 150g/day in winter. Getting more can be expensive. In spring we go for 350–500g/day.”
- Henry Callaghan developed an easier hill block with Italian ryegrass and rape to feed hinds from mid-January. He can also introduce grain to the weaners while they are still on mum. “It made a huge difference. It added 5kg to weaning weights and 3 percent to our scanning percentage and there was no tail end. It keeps the struggling hinds going – hind BCS increased by 0.5.”
- Justin Geary noted that all but one of the South Canterbury/North Otago Advance Party pre-rut weans. “The one that post-rut weans does it for logistical reasons. The others who pre-rut wean find it improves hind BCS and weaning weights.”

Protein power

The crucial role of protein in the growth of young deer can’t be overstated, with 14–16 percent crude protein in the diet recommended (fodder beet gives 10–12 percent).

Kris Orange of Great Southern Deer Farms updated the workshop on previously reported work that had shown a \$28/head boost from adding a 22 percent protein granulated feed to a fodder beet and baleage diet for weaners during winter. This figure was based on a modest \$7.50 schedule.

Last year they repeated the high-protein supplement but this time used peas rather than the Deer Supreme high-protein mix. “The peas were cheaper and, with the venison schedule now at historic highs, the additional margin from feeding the extra protein was \$44.50. Based on a \$10.50 schedule, that was a

240 percent return on investment. The key is to find the cheapest source of protein.”

Orange said the growth rates with the peas were equal to those on the more expensive protein supplement. He added that the protein boost during winter “supercharges” the young stock to kick on with their growth in spring. It was also useful for early velvet growth.

He said fodder beet “isn’t the be-all and end-all” of winter feeding, but it suited them because it fitted with a regrassing programme. He said it was also important to watch the quality of the baleage used, as this can be highly variable.

Advantage Feeders were used for the peas and these worked well. Dave France, who is a partner in Great Southern Deer Farms, said they had one feeder per 200–250 weaners. “Only 10–12 at a time would be feeding. They seemed happy to take turns.”

The farm has purchased a Jacky Bin that holds about 1 tonne, to transfer the peas from the silo to the feeders. While there’s more labour involved feeding the peas, the feeders need refilling only about every 10 days.

Red clover doing the job

Environmental campaigners urging farmers to use more nitrogen-fixing legumes would be well pleased with Tom Macfarlane’s red clover paddock, the first stop on our farm tour of The Kowhais.

He uses a lot of red clover, both dryland and irrigated. It persists well on the clay downs and can pump out up to 120kgDM/ha/day for long spells with water and heat. Establishment cost is about \$600/ha, about the same as for an annual crop but with the bonus of lasting 3 years. The Relish red clover is applied at 12–14kg/ha plus about 4kg of white clover to fill any gaps and help suppress weeds.



The red clover at The Kowhais produces from September through to May.

The red clover seed is broadcast along with drilled barley, followed by harrows and a Cambridge roller. The barley is harvested as a whole crop in January and then it’s irrigated and fertilised as the clover takes over. A couple of light nitrogen dressings are applied in the first year until the clover can start fixing its own.

Tim Turner said stock are put onto the clover when it reaches about 30cm and it’s grazed on 4–5 day breaks. No transition is needed for the forage but bloat could be an issue for cattle. Oestrogen is low, so hinds can be safely grazed on it to build up body condition going into mating.

The growth gets started in September and starts to drop back in about March. The last grazing is in May before the remaining leaf dies off for winter.

Macfarlane said it can be hard to keep on top of the growth at its peak and some is taken for baleage, which is useful for feeding with fodder beet in winter courtesy of its high crude protein. "We keep piling through the mobs of weaners in spring. As they get up to weight we bring in the next lot."

While the red clover does well on dryland thanks to its long tap root, it's sown there as a separate crop, not with barley. Grass with some plantain follows the 3 years of red clover, and benefits from the 150kg/ha of plant-usable nitrogen left behind.

The clover supports 15–20 weaners/hectare and Macfarlane said the gross margins achieved on it when it's growing well "can't be touched" due to the superior animal performance.

He said liveweights can appear to drop when weaners go onto the crop, but that is deceptive – it's because the gut content is less than when on the grass (weaners usually go onto grass in between winter fodder beet and the red clover when it's available in spring).

Red clover and lucerne have about the same nutritional value, but because the clover has less fibre than lucerne, it's better utilised. In addition, red clover will grow well on clay soils, whereas lucerne won't.

Precision direct drilling the way to go

There are plenty of benefits from precision direct drilling fodder beet, Macfarlane told the workshop visitors.

He found the utilisation from a direct-drilled crop was 1 t/ha better than a cultivated crop on the same land under the pivot. Also, the establishment costs were lower, with the direct-drilled paddock needing one less pass to prepare for the second crop the following spring. Yields in cultivated fodder beet crops are generally higher than direct-drilled, but so are establishment costs.

The direct-drilled crop (sown in early November) cost \$220/ha to drill with 150kg/ha of fertiliser down the spout (compared with a planting cost of about \$600/ha for a cultivated fodder beet crop). Macfarlane said having a good, careful driver doing the drilling makes all the difference when getting a good plant population established. They were getting yields of 18–19 t/ha for first year crops and 20–23 in the second year.

Macfarlane said they aimed to get up to 17 t/ha of usable crop at a cost of less than 10c/kgDM.

Fertiliser and spray costs are less with the direct-drilled crop, partly thanks to the minimal soil disturbance giving weeds less scope. Another benefit was the bulbs in a direct-drilled crop sit higher, allowing better utilisation.

Sediment loss is the greatest environmental risk from deer farming and NZ Landcare Trust's Janet Gregory advised that if grazing can't be done from the top of the slope downwards, to at



Tom Macfarlane discussing the merits of precision direct-drilled fodder beet.

least leave a 5-metre strip at the bottom that can be grazed last and that will intercept any runoff. Alternatively, a grass sward left at the bottom of the slope (rather than crop right to the fence) can act as a buffer.

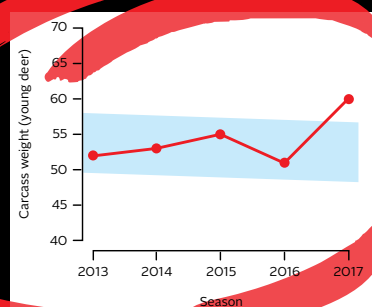
Macfarlane noted that the direct-drilled fodder beet paddocks dried out more quickly than the cultivated crops after heavy rain, probably because the soil structure was preserved. This reduced the pugging and runoff risk. (Heavy rain can occur during establishment, when cultivated soils are much more vulnerable to runoff.)

He said all first-year beet will probably be direct drilled from now on. The need for cultivation following the crop would depend on conditions.

"Sometimes it might just have to be a one-year crop." ■



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