



Deer Industry News

Case study farm:
Netherdale and
Laird Partnership

Conference Preview
ADVENTURER TO HELP
INSPIRE CHANGE
KEYNOTES CONFIRMED
AND THERE'S RUGBY!

Venison's Story
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IN PROTEIN, VITAMINS
AND MINERALS –
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Deer Industry News

OFFICIAL MAGAZINE OF DEER INDUSTRY NEW ZEALAND AND THE NEW ZEALAND DEER FARMERS' ASSOCIATION

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Cover: Velvetting stags at the Laird family's Netherdale block on a paddock of chicory. See page 10 for the first of our farm case study reports. Photo: Lindsay Keats.

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Finding opportunities in welfare challenges



Kate Littin.

IT'S 20 YEARS since New Zealand took a step forward for animal welfare and introduced the Animal Welfare Act 1999. The deer industry, recognising the importance of paying attention to animal welfare in order to manage a sensitive animal and to reach markets, developed the first code of welfare for a pastorally farmed species to be issued under the new Act. That milestone holds special personal value for me too, because it was the first job I was given as technical adviser starting in the former MAF.

The first major review of the Act culminated in 2015. Two key changes were the introduction of regulations with direct penalties to address low-to-medium level offending and, at the other end of the spectrum, the explicit recognition of sentience. This encourages acknowledgement of positive states of welfare – not just negative – and the consideration of positive welfare in the development of standards.

The review also led to the release of a national strategy for animal welfare, “Animal Welfare Matters”. The strategy is intended for all those involved – it’s not just a government document. The two key outcomes, better care of animals and reputation for integrity, are both important for progress in animal welfare in New Zealand.

Also, since the Animal Welfare Act came into existence we’ve seen significant progress in scientific understanding: we better understand how people view animals, how they decide what is acceptable practice and what isn’t, and how this translates to consumer behaviour. We better understand the impacts of farming practices on animals and how animals experience the world around them. We also better understand the human–animal relationship and its impacts on production and animal wellbeing – positive and negative.

So where to next? New trends are emerging and the more perceptive operators in the deer industry should already be able to see advantages in responding positively to these. One, the expectation that animals should be able to live a good life and not just a life that avoids unnecessary pain and distress, is a global change that is already being addressed in different ways in New Zealand. It is a stated intention of the National Animal Welfare Advisory Committee that positive welfare will be addressed in minimum standards as codes are reviewed. Currently only a few codes have standards around positive welfare.

Another obvious trend is the call for proof that standards are being met – it is not enough simply to have appropriate standards in place. At its extreme, this leads to calls for CCTV on farm and at slaughter. A move that might help with this is better reporting on what we actually do with animals in New Zealand, to fill in gaps in understanding with evidence rather than stories being told through media campaigns.

A third interesting trend is a move to introduce animal welfare into global conversations about environmental sustainability, whether explicitly through the UN’s Sustainable Development Goals or more generally through the introduction of One Welfare/One Health as a holistic concept to support change. We need a New Zealand solution that supports farmers and producers to meet obligations and expectations across animal, human/community and environmental safety and wellbeing. This is particularly so with growing limitations on resource use and management and the reality of climate change.

The New Zealand deer sector has a history of being proactive on animal welfare issues. This should serve you well as you respond to these ongoing changes in knowledge and expectations. ■

– Dr Kate Littin, Manager Animal Welfare Team, Ministry for Primary Industries



DEER INDUSTRY CONFERENCE 2019

Reflections and Directions

Thursday 16 May – Friday 17 May | Te Wharewaka O Pōneke Function Centre, Wellington

The Deer Industry Conference returns this year to Wellington’s Te Wharewaka function centre in the heart of the capital’s vibrant waterfront precinct. We welcome conference organiser Melissa Bähler of Positive Events Plus, who has been working alongside the DINZ and NZDFA teams to bring a fresh approach, this year under the “Reflections and Directions” banner.

THIS THEME WILL be borne out throughout the two days. The initial “reflection” phase will look at where the industry stands now – its assets, strengths and resources. This might also involve some consultation with delegates before the conference proper begins. The next phase (“directions”) will focus on the world we live in – daily realities and the shape of our future, both from an on-farm and in-market perspective. And finally, there will be a look at how to make these great ideas “stick”, by taking them beyond the conference venue into the industry’s next phase. This will be done through a comprehensive post-conference debrief, that will capture and distil the best of the ideas put forward over the two days.

Inspiring change

The deer industry first met adventurer, keynote speaker and management consultant Jamie Fitzgerald at the 2013 conference, also in Wellington. There he captivated his audience with the tale of his gruelling unassisted trek across Antarctica to the South Pole. He’s done much more besides, including rowing the Atlantic in record-breaking time, helping train 2011 Rugby World Cup volunteers, working with at-risk teenagers and featuring in television documentaries *First Crossings* and *Intrepid New Zealand*.

We’re delighted to say Jamie will be joining us again this year in an enhanced role putting



his strategic and leadership skills to work for the deer industry and helping us work through the “reflections and directions” discussions. Those who have seen Jamie speak will know that he is a great communicator and those attributes will be to the fore in his role as MC for the two-day conference. In addition he will be facilitating workshops focusing our theme especially around an environmental strategy for the deer industry, bringing fresh energy and an outside perspective to this vital work.

Helping provide this outside perspective throughout the conference will be four outstanding speakers:

1. **Colin James, Wellington:**

Perspectives on covering New Zealand’s political and likely societal emotions in 5–10 years’ time. Colin James is an experienced political journalist and commentator and life member of the Parliamentary press gallery. He is a senior associate of the Institute for Governance and Political Studies at Victoria University of Wellington and has a long history in presenting on the strategic, political policy and political/economic environment.

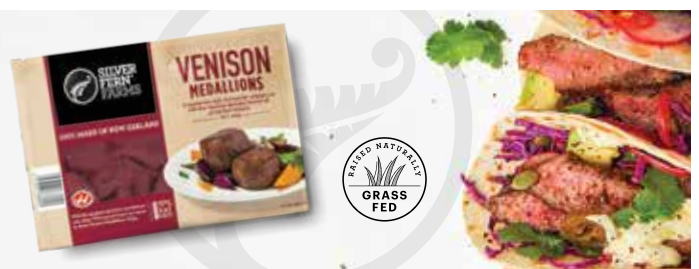


2. **Anna Campbell, Managing Director, AbacusBio, Dunedin:**

Interaction of livestock farming pressures and wider societal and political expectations. Anna, who has regularly taken part in deer industry conferences in recent



Delicious Starts Here.



years, is an innovative and strategic thinker who specialises in use of commercially focused science to improve agricultural food products. She has broad experience in both the meat and cereal sectors.

3. Philip Gregan, CEO, NZ

Winegrowers: The success behind the NZ wine industry's strategy and delivery. Philip has been with New Zealand Winegrowers and its predecessor, the Wine Institute of New Zealand, since starting as a Research officer in 1983, becoming CEO in 1990. NZW coordinates research programmes, provides a generic marketing platform for New Zealand wine makers in key markets and stewardship of "brand New Zealand wine", provides data and business information to grape growers and wine makers and, represents industry interests.



4. Grant and Ele Ludemann, EGL Pastoral:

The Ludemann story. The Ludemanns will reflect on their strategy and at times rocky road to successful pastoral farming since the 1960s. EGL's main focus is high-quality presentation of stock and milk with a reputation for quality, integrity and excellence. The Ludemanns operate 14 properties including four lamb finishing farms, a beef and lamb hill country farm and a large-scale beef and lamb finishing operation, with four dairy units in North Otago supported by three runoffs. They aim for a business that is satisfying and rewarding for both owners and employees, while operating as a profitable, sustainable, flexible and innovative pastoral farming enterprise.



As we go to press, some speakers and details are still being finalised, but at this stage the conference will also welcome:

- Mark Adams, Group Chair, Beef + Lamb New Zealand Environmental Reference Group, speaking on issues such as climate change, water quality, and biodiversity all set for regulatory change in the months ahead.
- A Coalition Government political representative (Invitations were still pending, but we are hoping that either the Minister for Agriculture and Biosecurity, Hon. Damien O'Connor, or the Minister for Climate Change and Green Party, co-leader James Shaw will be available.)

And the regular industry updates

In addition to this big-picture work, the conference will also feature the usual array of up-to-the-minute reporting from DINZ, the marketing companies and researchers.

This will kick off with a "State of the Nation" update from the DINZ CEO Dan Coup and Chair Ian Walker. There will also be comprehensive sessions on environment work, venison and velvet markets and industry research.

Social!

There's plenty of scope for socialising, including morning and afternoon tea and lunch breaks in the display area, a networking breakfast on Friday



Cap off a great two days with an evening watching the mighty Hurricanes take on the Jaguares.

17 May, and the Awards dinner on the evening of Thursday 16 May featuring the Matuschka Award, MSD Photo Awards, Biennial 2019 Deer Industry Environment Awards and the Deer Industry Award. As always it will be a great night to celebrate our industry.

But there's more! At the conclusion of formalities on Friday 17 May there's the opportunity to enjoy a final round of drinks and canapés at the conference venue before you are whisked away to the Westpac Stadium and the Super Rugby to watch the mighty Hurricanes take on the proud and passionate Jaguares from Argentina. What a way to cap off what will be an inspiring and fun couple of days!

Accommodation

Deer Industry Conference special rates have been arranged at the following hotels: (Unless notified otherwise, contact your choice of hotel and book your own accommodation needs)

- Copthorne Hotel Wellington Oriental Bay, 100 Oriental Parade, Oriental Bay: 04 385 0279 use code 6423640
- Park Hotel, 204 Lambton Quay: 04 260 5000 and use reference: Deer Industry Conference 2019
- West Plaza Hotel, 110 Wakefield St, Te Aro: 04 473 1440 ext 249 and use code: 445298
- Brentwood Hotel, 16 Kemp Street, Kilbirnie: 0800 273689 and use booking reference: 80530
- Apollo Lodge Motel, 49 Majoribanks Street: 0800 361 645 and

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continued on page 6

Reflections and directions: continued

use reference: Deer Industry Conference 2019

- Bay Plaza Hotel, 40 Oriental Parade, Oriental Bay: 0800 857 799 and use booking reference: 74430

Registration

There is plenty of flexibility for delegates attending the conference this year. You can choose to register for the entire two days including all social events, or you can mix and match with single day registrations and extra tickets if needed for the social functions. And once again there is a special discount for additional delegates from the same farm entity.

Download a registration form from www.deernz.org/2019-conference or call Melissa Bähler on 027 664 3080.

Programme*

Thursday 16 May – REFLECTION

Time	Session	Speaker
8:30 – 10:00am	NZDFA AGM – welcome all NZDFA members	
9:00am	Registration opens	
10:30 – 11:00am	Deer industry state of the nation	Dan Coup and Ian Walker, DINZ
11:00 – 11:30am	Rural and New Zealand financial outlook Sponsored by Rabobank	Hamish Midgley – Rabobank
11:30am – 12:00pm	Introduction and aims of the conference	Jamie Fitzgerald – Inspiring Performance
12:00 – 12:45pm – LUNCH		
12:45 – 1:15pm	Technical/science programme	Catharine Sayer – DINZ
1:15 – 1:45pm	Other science	
1:45pm – 2:30pm	Our environment work/plans	Lindsay Fung – DINZ
2:30pm – 3:00pm	Building direction	Jamie Fitzgerald
3:00pm – 3:30pm – AFTERNOON TEA		
3:30 – 4:45pm	Facilitated reflection	Jamie Fitzgerald
4:45 – 5:15pm	Political outlook – the rate of change: “Politics and society 5 years out”	Colin James
7:00pm AWARDS DINNER – hosted by Silver Fern Farms: Deer Industry Environmental Awards, Deer Industry Award, NZDFA Matuschka Award, MSD Animal Health Deer Industry Photo Competition		

Friday 17 May – DIRECTIONS

Time	Session	Speaker
7:30 – 8:15am – NETWORKING BREAKFAST		
8:30 – 8:45am	Introduction	Jamie Fitzgerald
8:45 – 9:15am	Political leaders	James Shaw or Damien O'Connor (TBC)
9:15 – 9:45am	Environment session keynote Sponsored by FirstLight	Mark Adams – Chair B+LNZ Environmental Reference Group

9:45 – 10:00am	NZDFA Views – TBC	
10:00 – 10:30am – MORNING TEA		
10:30 – 11:30am	Venison session General update Company updates: • Alliance • Duncan • FirstLight • Mountain River • Silver Fern Farms	Nick Taylor – DINZ
11:30am – 12:15pm	Defining our future • Scale • Impact • Direction • Role of Deer Industry New Zealand	Jamie Fitzgerald
12:15 – 12:45pm	Public perceptions Sponsored by Wilkins Farming Co	Anna Campbell – AbacusBio
12:45pm – 1:30pm – LUNCH		

Friday 17 May – MAKING IT STICK

Time	Session	Speaker
1:30 – 2:00pm	The success behind the New Zealand wine industry's strategy and delivery	Philip Gregan – CEO NZ Wine
2:00 – 2:30pm	Summary and feedback Next steps for environmental stewardship	Jamie Fitzgerald
2:30 – 3:30pm	Velvet session • Market update and strategies • Regulatory control scheme • Velvet traceability developments and timing	Rhys Griffiths – DINZ John Tacon – DINZ Catharine Sayer – DINZ
3:30pm – 4:00pm – AFTERNOON TEA		
4:00 – 4:15pm	Making it stick	Jamie Fitzgerald
4:15 – 4:45pm	The Ludemann Story – sponsored by FMG	Grant and Ele Ludemann – EGL Pastoral
4:45 – 5:00pm	Conference wrap up	Dan Coup and Ian Walker
5:00pm FAREWELL FUNCTION – hosted by Alliance Group Ltd		
5:00pm – 6:30pm Drinks and canapés in the Matiu and Mokopuna room		
6:30pm Transport to Westpac Stadium to watch Hurricanes vs Jaguares Super Rugby Game		

Transport after the game back to hotels

*Correct at publication date – may be subject to change.

Further information

- **DINZ:** deernz.org/2019-conference or contact Tony Pearse at tony.pearse@deernz.org, 021 719 038
- **Conference organiser:** Melissa Bähler, 027 664 3080, positiveeventsplus@xtra.co.nz
- **Conference venue:** wharewakaoponeke.co.nz (2 Taranaki Street Wellington), 04 901 3333 ■

Constitutional matters

NZDFA 44th AGM: 16 May 2019

1. AGM: Notice of meeting

Notice is hereby given that the 44th Annual General Meeting of the New Zealand Deer Farmers' Association (Inc) will be held at Te Wharewaka O Pōneke, 2 Taranaki Street, Wellington on Thursday 16 May 2019, commencing at 8.30 am.

The Chair and Executive Committee of the NZDFA invite all members of the NZDFA, industry levy payers and interested parties to attend.

2. NZDFA Executive Committee Appointments

Members of the NZDFA Executive Committee (one member representing the North Island, one representing the South Island and the two "Members at Large" positions created by the Constitutional change in 2012) are elected for a two-year term. Members retire by rotation and are eligible for re-election. According to the NZDFA constitution rules, the Executive Committee elects a Chair from among the four members, for a term that is also decided annually. This has been traditionally a 12-month term.

Nominations have been called for the two vacancies created by retirement by rotation.

Executive Committee Member at Large (1 position)

For the vacancy created by retirement by rotation of David Morgan SCNO, who has announced his retirement, the single nomination **Mark McCoard, Taihape**, (nominated Andrew Peters, seconded Tania Taylor) was received and he is declared **appointed** for the 2019–2021 term.

Executive Committee South Island (1 position)

For the vacancy created by retirement by rotation, a single nomination of sitting member **Justin Stevens, Marlborough**, (nominated Tahi Doonan, seconded James Cameron) was received and he is declared **appointed** for the 2019–2021 term.

The successful candidates will join sitting members **John Somerville, Southland**, and **Grant Charteris, Hawke's Bay**, as the 2019–20 Executive Committee of the NZDFA following the conclusion of the 44th NZDFA AGM on 16 May 2019.

3. NZDFA Selection and Appointments Panel

The SAP consists of the four-person Executive Committee and

four non-Executive Committee elected members. Two of the non-Executive Committee elected members of the Panel retire annually by rotation.

SAP North Island (1 position)

A single nomination has been received for the vacancy created by the retirement by rotation policy, that of the former Waikato Branch Chair, **Steve Borland**, (nominated Albert Cooper, seconded Mike Oxley) who is eligible for nomination and is declared **appointed** unopposed for a two-year term.

SAP At Large (1 Position)

A single nomination has been received for the vacancy created by the retirement by rotation policy (Brian Russell, who has retired), that of Donald Whyte, (nominated Brian Russell, seconded Ian Bristow) who is eligible for re-nomination and is declared **appointed** unopposed.

Steve Borland and **Donald Whyte** will join current non-Executive Committee elected members **Paddy Boyd** and **Leith Chick** on the 2019–20 NZDFA Selection and Appointments Panel.

4. NZDFA appointments to DINZ Board

Producer-appointed Board members are appointed directly to the DINZ Board for a three-year term and that appointment is advised to the Minister for Primary Industries as a formality.

There are two vacancies for the 2019–2022, Board term, created by the retirement by rotation of sitting member, Ian Walker and the vacancy created at the conclusion of the two-year extraordinary appointment created by the early retirement of former Chair Andy Macfarlane in 2017.

A single nomination for each position has been received, those of current members, **Ian Walker, Hawke's Bay** (nominated Frances (Ponty) von Dadelszen, seconded Richard Hilson) and **Mark Harris, Waikato** (nominated Catherine Morrow, seconded Barry Mackintosh).

They are invited under the NZDFA constitution to present a short overview of their candidatures at the 44th AGM in Wellington on 16 May 2019 before the meeting's general business session. The Selection and Appointments Panel will carry out its processes and make the appointments before 1 July 2019, as required. ■

– AJ Pearse, Returning Officer for the NZDFA, 1 April 2019



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‘Wrist-band’ tag likeliest

by Phil Stewart, *Deer Industry News* Editor

The future of velvet traceability is starting to become clearer, with a wrist-band style of scannable tag emerging as the likeliest contender. The new style of velvet tag will ideally be introduced in time for the 2019/20 velvet season.

THEY WILL REPLACE the current plastic cable-tie tags, which are no longer deemed fit for purpose. Their propensity to break and detach from velvet when frozen means they cannot provide the reliable traceability pathway that regulators and markets demand. DINZ takes the view that upgrading the physical integrity of the tag provides an opportunity to strengthen the risk management system across the whole industry, including biosecurity, food safety and welfare assurances that support New Zealand velvet’s premium market position. Tags stay with individual velvet sticks until the point of export, or for velvet being processed in New Zealand, until the velvet is sliced or ground.

DINZ Policy Manager, Catharine Sayer, told *Deer Industry News* that four types of tag have been evaluated with the help of the Southland NZDFA, PGG Wrightson, Provelco and CK Import Export. Priorities for a new tag included:

- easy for farmers to apply
- light
- resilient to damage when frozen, in transit or during whole-stick processing
- not prone to damaging the velvet
- recordable quickly and accurately
- capable of bearing industry branding
- affordable.

The preferred tag type is a synthetic paper wrist-band style incorporating a UHF chip and bar code (see illustration). It is a combination of two of the four types of tag that have been evaluated. The four types were:

1. Plastic-coated synthetic paper wrist-band (too shiny to adhere well and poor UHF chip readability)
2. Cable-tie sleeve (too fiddly and expensive)
3. Black synthetic paper wrist-band (the best design – worked well but looked tatty after use following blood/grease absorption)
4. Synthetic paper not yet made up as a tag (worked best on UHF chip read trials at packhouses).

Sayer said the preferred design is a combination of the third and fourth options evaluated. “One great advantage of the choice of UHF chip to go in the tags is that multiple tags can be scanned simultaneously, which is important to buyers and packhouses.”

The tags will also incorporate a printed barcode which farmers could use for linking the sticks to the relevant stags in their own records; in fact some velvet producers already use barcoding.

Sayer added that scanners for the UHF chips are more expensive than the low-frequency tag readers used for NAIT tag scanning but these scanners aren’t required on farm in any case – rather they would be used to scan product in and out at buyer grading facilities, packhouses and so on. A database would be built

to record tag distribution and tagged velvet movements.

Sayer said farmers who had evaluated the four trial designs liked the idea of tags being kept on a roll and DINZ would endeavour to secure supply in that format.

A meeting with velvet processors, buyers and exporters on 29 March gave strong support for the proposal. Industry figures at the meeting commented that staggering implementation of a new tag first, followed by changes to recording processes later, was a sensible idea. They counselled that all changes to record-keeping requirements and processes should be thoroughly tested with system users first.

The next steps in finalising the concept in terms of changes to information recording obligations will be consideration of feedback from the NVSB, processors, buyers and exporters and consultation with farmers and veterinarians. The NZDFA has expressed a preference for a series of shed meetings similar to those used in the run-up to new hygiene regulations in 2017.

What the proposal means for different velvet supply chain participants can be viewed in detail on the DINZ website at: deernz.org/velvet-traceability ■



The preferred wrist-band style of velvet tag.

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Season	Carcass weight (young deer) (kg)
2014	50
2015	52
2016	55
2017	50
2018	55
2019	58

Case Study Farm

Netherdale and Laird Farming

by Phil Stewart, *Deer Industry News* Editor

When he came back to the family farm in 2012, Fraser Laird set about reviving his father's early passion for deer. In a large, complex farming operation covering seven blocks in the Fordell district, east of Whanganui, the animals are now making a strong contribution to the bottom line of the Netherdale and Laird Farming Partnership.

FRASER LAIRD BELONGS to the Central Regions Advance Party (AP) and is one of several AP members who have agreed to contribute as case study farms, giving the wider industry a better understanding of the kinds of practice changes that can make a deer enterprise more productive and profitable. This is the first in a series of more in-depth studies into what makes a successful farm tick.



Fraser Laird: Helped rebuild deer enterprise.

Farm history

Fraser's father Trevor Laird first went into deer in 1986, share farming with the Bruce family on their Netherdale block, a partnership that continues today. The velvet-focused enterprise progressed well, building to about 500 stags and 200 hinds. However it was competing with other parts of the business, and when prices took a hit in the early 2000s, Trevor got rid of the breeding herd and cut back to about 40 velvetting stags.

On returning to the farm after his travels, Fraser started building up the deer side again, buying in hinds with good velvet genetics from several sources including John Hunter, Steve Borland, Tower Farms, the former Pampas Heights and Netherdale Stud. As deer numbers increase, sheep numbers will be reduced.

Farm facts

- Total area 900 hectares (850 ha effective, cultivable 570 ha, 216 ha deer fenced on three blocks)
- Seven blocks including two family-owned totalling 250 ha, two share farmed and the balance leased

- Main enterprises: sheep, beef (Wagyu x), deer (velvet) and cropping
- Velvet harvest: 1.9t; aim is to breed a 3kg minimum R2 stag
- Venison: A few older cull stags (based on weights) and hinds (dries and wet/dries) are sold for venison through Cerco
- Live sales: 80 R2 females sold each year
- Contour: half flat, half rolling
- 900mm rainfall, usually dry late summer, wet winter/spring
- Soils: Silt loam with seams of clay; can get boggy and prone to pugging; some tile and mole drains in wetter areas
- Stock units (2018): Sheep 5,070, Beef 2,920, Deer 2,147.
- Deer numbers (21% of total stock units):
 - 214 mixed-age (MA) breeding hinds and 60 R2 hinds (building to 300 MA and 80 R2)
 - 280 MA velvet stags and 120 R2 stags (building to 500 total)
- Development: Deer fencing some sheep paddocks on rolling country on Laird block to create good fawning paddocks and bring breeding hinds back from leased block.
- Permanent pastures: Nui and white clover. AberMagic high-sugar ryegrass was trialled, replaced with Viscount.
- Crops: Total about 180 ha on all blocks. Half is cash cropping (maize, barley); balance is fodder beet (cattle and deer), raphno (lambs, cattle and deer), chicory (deer and lambs), plantain.

Challenges

- Pugging a problem, even on free-draining soils, in wet weather
- Dry period mid-January – late February is a challenge for hinds and fawns
- Less scope to cull hinds while building breeding herd
- Shifting deer between properties
- Less certainty of lease blocks
- Slower than ideal growth rates in young stock.



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continued on page 10

Laird case study: continued



Sheep fencing on the Laird block is being replaced with deer fencing to accommodate hinds for fawning on more suitable terrain.

Feeding

Fodder beet and chicory are mainstays for the deer. Chicory (“Choice”) is sown as part of a pasture replacement programme and follows run-out pasture. The Lairds have tried various combinations but find chicory with undersown clover works best. A stand can last up to five years and is usually followed by fodder beet and then new perennial ryegrass with white clover.

The wetter paddocks are avoided for chicory and fodder beet. Some fodder beet is lifted when conditions allow and fed to mixed-age stags in the paddock in autumn following the roar. “They go nuts for it,” Fraser says. The feeding out helps avoid soil damage, ensures good utilisation and settles the stags well, costing an estimated \$16.80/head over 6 weeks. Some of the harvested fodder beet is sold as a cash crop.

During winter, when it is too wet to feed out, fodder beet is also break fed to stags for 3–4 weeks, supplemented with baleage and using some palm kernel that had been bought to cover a dry spell that never eventuated. On the plus side this spares pastures and saves labour costs, but on the downside wastage of the crop is high and utilisation not so good.

Hinds have also been run on fodder beet for 75 days from mid-August in the past, with the crop supplying virtually all of their daily dry matter requirements for maintenance. It is now used for hinds as required.

Breeding

Fraser says breeding has become a passion. “It’s always exciting to see how the next generation of stags is going to turn out.”

He is pleased with the hind base, which has been built up from a variety of sources. His ideal hind is one that produces a stag fawn with a good two-year-old velvet weight (he is aiming for a 3kg minimum). Size and temperament are not such big priorities. “Some of our hinds get quite big because we have good winters.”

He is buying in hinds as well as breeding his own replacements. Because he is still building up the hind base, he cannot cull as hard as he otherwise might, so hinds that fail to deliver a live fawn as R2s can get another chance. That said, his reproductive performance figures aren’t bad: 86 percent for the R2s (fawns weaned to hinds mated) and 90 percent for the mixed-age hinds.

He looks for breeding values when they are provided but also focuses on conformation when buying sires and hinds. “Not all studs use BVs – it would give us more confidence if they did.”

He is now focusing on English (Warnham) sires that will give

him the style of velvet he wants: a nice clean beam, rounded, with some length in the tops. “I’m not going after the heaviest weights because they are often also the ugliest.”

Weaning is done pre rut because it gives the flexibility to mix hinds into single-sire mating mobs. And because the autumns are usually kind, hinds can be safely run on the harder country while young stock are given the pick of the best feed. First fawners are mated to two-year-old sires.



Velvetting stags on the Netherdale block. DNA parentage testing is being used to help identify the high and low-performing bloodlines.

They have been DNA recording all breeding hinds (“it’s a lot easier than spotting [hind and fawn pairs]”), but from now on will limit the recording to replacement hinds and the top and bottom of the velvetting stags.

Animal health

An animal health plan has been put together with vet Dave Rankin and after additional discussion with AP facilitator (and veterinarian) Pania Flint.

Because conditions are reasonably benign and stocking rates are not high, losses are low. However Fraser acknowledges this could change as stock numbers reach target levels.

Health inputs to adults are kept minimal, with individuals treated if and when required. The main health risks identified for this property are: internal parasites including lungworm, yersiniosis, copper deficiency and ticks.

Weaners are drenched at intervals of 4–6 weeks and any individuals with lungworm are treated as required. They are routinely vaccinated with Yersiniavax®.

Bayticol is used to treat for ticks from September through until fawning. Copper is applied through fertiliser, but levels in stock are carefully monitored. Fraser avoids grazing weaners on temporary grasses as they tend to be low in copper.

He minimises stress in his animals by handling them as little as possible and staying calm and confident when yarding them.

Expiry Date	Dose Rate	Withholding Period	Slaughter Safe Date	Administered by
12/2018	20mg/ml	10 days	17/19/16	Philip
1/2017	4.5ml	10 days	17/19/16	Philip
1/17	14 days			Fraser

Accurate treatment records for anthelmintics are kept to ensure withholding periods are observed.

Environment

An industry-wide goal is for all deer farmers to have a Land and Environment Plan in place by 2020. Fraser is going to put a plan together and will seek advice in doing so.

While there are no strong pressures from the regional council on nutrient losses at this point, he is well aware of the industry's need to lift its game. He has been chipping away with fencing off sensitive areas each year but this is still in the early stages. Plantings are also being done and the first of these are maturing. To minimise runoff risks, crops are grown only on the flats.

The main environmental risk where deer are run is pugging on the wetter, heavier soils. Lifting some fodder beet crops rather than feeding in situ helps mitigate this. They are also filling in damaged areas around troughs, but controlling deer behaviour and wallows is a constant challenge.



The first plantings for environmental enhancement are starting to mature.

Monitoring

Fraser says their velvet performance is well behind the industry's top commercial producers, but they are monitoring closely to track their efforts to lift production per head.

All velvet weights (first cut plus regrowth) are recorded against individual stags and progeny performance matched against dams.

One area for more measuring is weaner growth rates and Fraser intends to set up more accurate weigh scales and recording to keep a closer watch on young stock (see box opposite).

The people factor

The Netherdale and Laird Farming Partnership has three permanent employees: Fraser, his father Trevor and brother Steven. One part-time employee works 6 months of the year.

Fraser says the three family members complement each other.

"Steven looks after the machinery, the cropping side and the finance, I'm focused on the deer and our father is the generalist.

I like working with sheep, although their numbers will drop as we make room for more deer. We'll always have sheep and they complement the deer well, but it's the deer that I really enjoy."

The partnership uses advice from an agronomist from Farmlands, with soil management and plant nutrition advice from Nutri-Link. The family bounce ideas off each other and on the deer side, Fraser makes good use of the Deer Hub, Deer Facts and the Advance Party.

He's attended several DFA Next Generation programmes and is also involved in the industry through the Central Regions branch of NZDFA, both useful links to his deer farming peers. ■

• Photos: Lindsay Keats.

Projects to increase productivity

1. Growing out young stock

It's important for the Lairds to grow young stock well – for replacement hinds to get to good weights in time for their first mating, and for velvetting stags to encourage pedicle development and have them hit the ground running as two-year-olds.

This has been a challenge most years, but in 2018 the late summer delivered plenty of rain and good feed. "That made a big difference to weights and hit home just how important it is to feed them well over late summer and autumn."

Because pasture quality can't always be relied on, Fraser is going to focus on using raphno (a kale/radish hybrid) and chicory to give young stock the boost they need through this period.

Their sheep and cattle do well on the raphno, so the deer are expected to as well. It can be grazed for up to 150 days so can take stock through well into late autumn. Another advantage is that it won't flower and lose quality as kale can do in summer.

The chicory is good for up to five years, although needs undersowing with grass after a couple of years, before it thins out.

2. Weaning into shelter

The Lairds use Redpath shelters (a clear-roofed shelter used in dairying and horticulture) for wintering some Wagyu cattle fed on fodder beet and lucerne baleage.

Having had problems with weaners growing slowly, being unsettled and getting through fences, Fraser is going to try weaning young deer initially into these shelters, feeding lucerne baleage and possibly some palm kernel. The plan is to settle them and get their growth rates going faster.

Fraser notes that Landcorp has achieved excellent in-fawn rates with first fawners through good feeding and he wants to do the same. "My R2 hinds do okay, but they tend to conceive later."

He plans to keep the weaners in the shelters for 8 weeks before putting them out onto annual grasses.



IS PROUD TO SUPPORT THE
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DNA, Deer Select and drones all the buzz in Hawke's Bay

by Richard Hilson, additional material by Phil Stewart

Farmers from far and wide gathered at the historic Cornwall Cricket club grounds in Hastings on 27 March for the first part of the "but wait, there's more!" Hawkes' Bay Progressives and Originals Advance Party (AP) Regional Workshops. AP facilitator Anyika Scotland led a well-planned three-hour session, which covered all the bases concerning DNA testing, Deer Select and some practical pointers on paddock pairing of hinds and fawns.

MANY HAWKE'S BAY deer farmers have the bit between their teeth as they look for gains in venison and velvet productivity, with some top venison and velvet sires representing a wide range of studs now residing in the region and correspondingly strong interest in deer productivity.



Facilitator Anyika Scotland leads discussion at the workshop.
Photo: Richard Hilson.

DNA basics

DINZ Deer Select Manager Sharon McIntyre, who combines a practical deer farming background with professional interest in genetics, was the key speaker. First, she took the group through the basics of DNA and DNA testing. Explaining the differences between the older micro-satellite parentage testing, which linked fawns with sires through a process of elimination, and the newer genotyping-by-sequencing (GBS) technology, McIntyre described the practicalities of taking ear-punch samples for DNA testing.

"Routine" DNA testing using GBS already provides reliable information on parentage, breed composition, inbreeding and possible genomic relationships, she said, but added that the

information-rich technology has the potential to tell much more in future: AgResearch's animal DNA genotyping business, GenomNZ, is looking at genomic breeding values and the identification of both lethal and desirable traits.



Example of tissue sampling applicator and kit.

She said that for parentage testing, all possible sires, dams and progeny – including dry hinds (they may have had a fawn, raised by another hind) and back-up sires – needed to be identified. Supporting information such as mating groups, fawning or weaning groups, weaner sex and relevant AI or ET records, was also useful.

Testing costs

Naturally, farmers were price-inquisitive and McIntyre explained the cost of a range of testing and volume options, as well as the cost of equipment and consumables. With testing costing just shy of \$30 a head, it was clear that good use needs to be made of the data to get best value.

She said per-animal test costs using GBS ranged from \$32.00 (ex GST) for less than 100 samples, to \$25.85 when more than 300 were submitted. The tissue sampling unit applicators incurred a one-off cost of \$110, with a unit cost of \$3 per sample.

Several of the farmers at the workshop are already using DNA parentage testing and others were intending to get underway in the next year or so. McIntyre went right back to basics in terms of getting going with testing, showing the equipment involved and describing in detail how this was used. This included hints on procedures and guidelines on sample handling and recording.

An explanation of Deer Select followed. While none of the

farmers at the workshop currently use Deer Select in their commercial herds, three farms are considering it and all farmers are well aware of the service, often checking eBVs when selecting stags. McIntyre said eBVs for 12-month hinds could give an insight into the velvet potential of their half brothers, before their two-year-old velvet performance was known.

Whole-herd test or focus on younger dams?

Using real-life examples of two Hawke's Bay Progressive AP farms, Anyika Scotland asked attendees to consider the options for the farms' use of parentage testing.

Duncan Rose outlined the current state of play on Ngatapa, which has 300 of 1100ha deer fenced and is on steep pumice country near the Mohaka River. With 1000 breeding hinds and 900 stags, Duncan is looking to make best use of some well-bred hinds and recent purchases of top velvet sires. He aims to have about 500–600 hinds fully DNA profiled within the next five years, breeding some of his own sires and selling surplus animals at a premium.

From a standing start, the Roses were facing an initial cost of nearly \$50,000 to get the whole herd DNA profiled, before settling down to an annual cost of between \$15,000–\$22,000 for testing new fawns and sires, depending on numbers. A more workable scenario for them could be to focus on the younger hinds and their fawns only, plus sires, and also identify bought-in hinds that have already been DNA tested. This was estimated to settle down to an annual cost of about \$15,000 based on a 600-hind herd.



Workshop attendees. Photo: Richard Hilson.

Rachelle Coles also presented an overview of the farm she runs with Graham Storrah, where most of the 285ha farm is deer fenced. With 450 hinds and 530 stags (including spikers) they have also made significant investment in top sire stags and are looking to capitalise. They, too, were weighing up the benefits of DNA testing everything to start with, including older hinds and retained velvetting stags, or just starting with the younger hinds, fawns and sires – a less expensive but probably still effective way to build up a DNA profile over time, generating a good information base for selection decisions.

Attendees worked in groups to consider either of the two farms. Enthusiasm for use of DNA was notable, with a range of possibilities considered to get best bang for bucks while also not delaying any decision on progression with the available technology. It was apparent though, that planning would be prudent and it was suggested that budgets and business plans



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The deerapp also includes the feed intake and feed allocation calculators developed by Dr David Stevens and Marie Casey. More calculators will be added.



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Hawke's Bay workshop: continued

be applied to use of the technology because annual costs were considerable, especially in the formative years.

McIntyre said a key consideration for each farm beyond outright cost was to spend judiciously by tending towards testing of younger cohorts of hinds, building profiles and avoiding testing of older hinds that may be shortly culled for age: good advice for commercial herds. (However one farmer who had bought some high-quality older hinds was still keen to pair them with their fawns, so it's not a hard-and-fast rule.)

Paddock pairing experience shared

The final presentation summed up 21 years of paddock pairing experience by Richard Hilson and Karen Middelberg. From small beginnings in 1998, they have paired nearly 5000 hind/fawn pairs, learning a few handy tricks along the way.



Spotting a fawn feeding is one of the surest ways of pairing. Photo: Richard Hilson.

From use of a spotting scope mounted on a ute window and many hours in the paddock, their system has evolved to a somewhat more leisurely procedure from a table on the edge of the elevated house section, 250–330 metres from a useful paddock. With a top-quality spotting scope, this job has shrunk from about 25 hours' observation to as little as four hours this year, for 250–280 pairs across five or six mobs.

A key part of speeding up the process has been using a drone to get settled and snoozing fawns back on their feet and paying attention to their mothers. Previously, timing of pairing relied on the mob being active and fawns being hungry enough to seek their mothers for a drink. With fawns often settling for a couple of hours between feeds, this limited opportunity for pairing. The drone,



A drone will prompt fawns to run to their mothers and help speed up visual pairing. Photo: Richard Hilson.

which conveniently hovers when the controls are released, has simplified the process no end.

Hilson also gave a short run-through of their spreadsheet-based recording system and the formulae used to help select poor- or high-performing hinds.

A brief discussion on using drones for a diverse range of farm tasks also created interest and some similar stories – including one about a drone permanently parked 10 metres up one of those ubiquitous Hawke's Bay Lombardy poplars and very unlikely to be retrieved in working condition! ■

- Acknowledgement: **Anyika Scotland** and **Sharon McIntyre** for assistance compiling this article.

Workshop piques interest in change

Workshop attendee **Ben Anderson** is setting up a velvetting operation near Onga Onga in Central Hawke's Bay and found the workshop very useful. He hasn't DNA tested for parentage information thus far, being content with spotting pairs and using collars to help with identification. Although in-paddock pairing can be accurate if done well, Anderson said the workshop has definitely piqued his interest in trying DNA parentage testing.

He was also very interested in the presentation on drones. "One guy [at the workshop] hadn't used a dog with his deer for four years. I think dogs can put deer under too much pressure so I'm seriously considering getting a drone. It would also be very useful for safely checking troughs in a paddock when the stag is in with the hinds," he said.

Dealing with the unknown

Nick Sowman learned plenty at the Regional Workshop, having purchased a 160-hectare going concern east of Havelock North only 18 months ago and with plenty of development needed. The velvet-based operation has 250 hinds, 120 yearling stags and 50 mixed age stags and is still in a building phase.

"I'm conscious of not putting the cart before the horse with genetics and just going out and getting flash sire stags. I know I've got some good capital hinds already, but I still need to see what they'll do first. Also we don't have the setup to be able to single-sire mate yet, so that makes it harder to know how sires are performing."

Sowman said achieving a velvet production advantage of 1kg/head was perfectly possible through breeding. "That's a potential advantage of \$140 per animal. A beef breeder would be pleased to get that sort of improvement through genetics alone."

He said Sharon McIntyre's presentation was "amazing" and opened his eyes to the possibilities of genetics and parentage testing as a tool. While he's still in a building phase – he plans to settle on about 350 stags and a high-quality hind base of about 80 – the workshop highlighted the advantage of investing in good-quality DNA-recorded hinds.

While his focus is velvet, he is conscious that stags culled as two-year-olds still have plenty of value as venison animals, so the carcass will also be an important consideration in his breeding objectives.

"The more that people record what's going on in their herds, the better. It's going to take us a couple of years to see what our genetics are doing, so we're keeping good records as we go."

Summer Cervena® 2019 campaign launched in Europe

by Ali Spencer, *Deer Industry News* writer

Alliance Group, Duncan NZ and Silver Fern Farms are working with DINZ in the third year of Passion2Profit (P2P) Primary Growth Partnership activity raising Cervena awareness for Northern European summer menus.



Shannon Campbell putting Cervena on show for top chefs at the Metro Academy.

THIS YEAR'S SUMMER Cervena campaign, running from late-March through to August, has a primary focus on foodservice. The venison exporters are building on previous activity and now working with their respective importers/distributors in Benelux and German markets to lift sales to chefs and foodies in the region.

Alliance and Duncan NZ are working with importer/distributor Bimpex in Belgium. Their campaign launched in mid-March at an event held at wholesaler Metro's Chef Academy in Antwerp. Young culinary star Sam van Houcke, assisted by DINZ consultant chef Shannon Campbell, led the culinary demonstrations to introduce Cervena to the wholesaler's sales team at an event for key customers. Van Houcke won the 2018 Star of Belgium competition and the Central Europe final of the Global Chefs Challenge and will represent Central Europe at the global competition next year.

The campaign seeks to attract the attention of high-end and more casual-upmarket establishments, in particular, says DINZ Venison Marketing Manager, Nick Taylor.

"We want to get Cervena on the menu of chain restaurants like Ellis Burger and trendy concepts like Balls & Glory".

The group also want to get Cervena added to the baskets of gourmet home-delivery services, like Hello Fresh and Foodbag, and will continue working with high-end butchers through wholesaler Franky to promote the product and brand.

Metro stores' Spring Nocturnes for key chef customers will also include Cervena presentations, supported by promotional brochures and material.

Bimpex has introduced a new wholesaler, Carman's, which joins Pinkie and Geysens extending Cervena's reach.

"Sales staff from all three wholesalers have attended workshops, learning about Cervena," says Taylor.

Two small retail trials are also planned with Lidl and Delhaize's Belgian stores with Cervena leg steaks featuring in the former's stores and some pre-made items in the latter.

Silver Fern Farms is working with its own importer, Luiten, in the Netherlands and is promoting Cervena via events and tastings, supported with social media activity, articles promoting Cervena and recipes in key magazines, and advertising.

In Germany, Silver Fern Farms is promoting Cervena at Fine Food Days in Cologne and the Internorga trade fair for chefs in Cologne. It will also work with its in-market ambassador, Daniel Gottlich of Ox & Klee to leverage its Select programme for venison.

All three venison exporters have prepared their own promotional material, including brochures and table talkers using the DINZ Cervena brand guidelines, presenting a unified look for the campaign.

Taylor explains Cervena's Facebook page will geo-target one post a week in Germany during the season, including three videos developed last year for the campaign. In addition, a new German language Cervena website has been set up. ■

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New partnership with MasterCooks of Belgium

by Ali Spencer, *Deer Industry News* writer

A new partnership has been signed by DINZ with MasterCooks of Belgium, a premier chefs' organisation, at the start of the 2019 Summer Cervena® campaign.

CERVENA WILL BE in esteemed company – 44 of MasterCooks' 167 members hold Michelin Stars, including Peter Goossens who holds three. MasterCooks holds workshops, seminars and producer trips, has its own TV show and magazine and writes a column for *Ambiance* magazine, explains DINZ Venison Marketing Manager, Nick Taylor.

"It's an exciting development for us. MasterCooks members are the top chefs in Belgium."

The deal includes promotion for Cervena in the MasterCooks newsletter twice a year, a two-page advertisement in their handbook, Cervena being served at MasterCooks events and DINZ setting up a programme with the Young MasterCooks sub-group, he says.

"Fostering relationships with these top chef associations is important in helping Cervena to become widely known and understood by the top chefs in Europe. DINZ is continuing to work with the European chef group JRE, which it has worked with for many years. This year we sponsored their annual assembly in Bruges during March, where Cervena was served at a BBQ event," says Taylor.

DINZ is also organising Cervena food pairing workshops (see *Deer Industry News*, December 2018/January 2019) that will be held in Belgium, the Netherlands and Germany, attended by selected media and bloggers. ■



MasterCooks.

Paddy taking Kiwi inspiration to Germany

by Ali Spencer, *Deer Industry News* writer

Underscoring the fresh versatility of Cervena® for summer menus, the services of up-and-coming young Kiwi chef Patrick (Paddy) Pope-Moody have been secured.

POPE-MOODY IS OFF to Germany soon in a DINZ-led activity, working in the market with Silver Fern Farms as part of the industry's P2P programme.

"We wanted to take a young New Zealand chef to Germany to show this country's fresh and innovative culinary skills," explains DINZ Venison Marketing Manager, Nick Taylor.

"We were really impressed with Paddy's passion for venison during last year's Silver Fern Farms Restaurant Awards and were delighted that the timing of his planned OE trip fitted in with what we wanted to do."

Pope-Moody, 20, won the Silver Fern Farms Restaurant Awards inaugural New Entrant category in 2018 and is a protégée of Paul Limacher, head chef at Wellington's acclaimed Chameleon Restaurant (*Deer Industry News* June/July 2018).

He will be in Germany for all of May, spending a week each in four top restaurants – Restaurant Volt in Berlin, Dr Kosch's Gastrobar in Düsseldorf, Becker's Restaurant in Trier and Restaurant Carmelo Greco in Frankfurt. Throughout the journey, he will be involved in Cervena events for press and bloggers, which will be reported through social media, print and online.

"It's a great opportunity for him to gain experience and inspiration for his future career," says Taylor, adding the chef will have a good support network in Germany and will be working closely with DINZ consultant chef Shannon Campbell. ■



Patrick Pope-Moody: showing off New Zealand's next generation of culinary skills.

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Every mouthful of venison counts, nutritionally

by Ali Spencer, *Deer Industry News* writer

It's official: "Venison is naturally low in fat and saturated fatty acids. It is also high in protein, vitamins and minerals, particularly iron, making it an ideal choice in a healthy balanced diet."

NUTRITIONAL RESEARCH FOR New Zealand venison has been updated for the first time in 10 years, bringing it up to date with latest health guidelines. A scientific review of the latest available nutrition science for venison and red meat has been undertaken for DINZ.

Aligning with the advice, and finding where the positive opportunities are, is the way to go for New Zealand venison, explains DINZ Venison Marketing Manager Nick Taylor.

Some health authorities, such as the Heart Foundation and World Cancer Research Foundation, have recommended consumers need to "eat less red meat", he noted.

"However, this does not mean they are suggesting abstaining from red meat, or that they recommend a very small intake," explains Taylor. "The recommendation is to eat red meat three times a week, up to a maximum of 500g cooked meat a week, or 750g when raw."

In addition, the much-criticised EAT-Lancet report released earlier this year was the first attempt to set nutrition and sustainable eating into a global framework.

"It is likely to be the first of many combined recommendations, which may influence national and global recommendations in time."

Understanding where venison sits in relation to current nutritional/dietary recommendations is essential, he believes. With that in mind, he says, DINZ engaged the services of Foodcom (directed by trained dietitian Julie North) last year.

The team at Foodcom first carried out a survey of New Zealand's dietitians and nutritionists to find out where they are sitting in relation to venison in the diet and also red meat. This will help the tailoring of appropriate information for them and also give a

benchmark for future research to assess how well the activity has gone.

While the number of those advocating red meat in the diet outweighed those who did not, North was also surprised at the significant number who were undecided. There was also a low awareness of venison's role in the diet.

"We have an extraordinarily large number of dietary health professionals sitting in the middle 'unsure' camp about the importance of red meat in the diet," says North. "This is a concern, I think, because it shows the current trends around plant-based diet are starting to have a little bit of an impact. However, it also indicates a very good opportunity as they are likely to be highly receptive to information. The timing and relevance is likely to be really good for venison," she says.

Foodcom then turned to a global search of all the available literature to find research specific to venison and its health outcomes, rather than more generally on red meat. They found very little specific research to draw on relating directly to venison.

"What there was, was fairly dated and sometimes used the term 'venison' to refer to 'game and other meats'," North says.

However, Foodcom drew information from 32 relevant papers – a mix of epidemiological and clinical research on red meat in the diet and global health guidelines published since the last review in 2009. These include position papers from the New Zealand Heart Foundation with regards to healthy eating for cardiovascular health, a Focus on Nutrition Key Findings of the 2008/2009 New Zealand Adult Health Survey and recommendations from the World Cancer Research Fund (WCRF). All have influenced the Ministry of Health's Food and Nutrition Guidelines, which were last revised in 2015.

Table 1: Key nutrients in a 100g serving of venison compared with 100g of other meats

		Venison medallion	Chicken breast (no skin)	Pork loin medallion	Beef forequarter Scotch fillet	Lamb hindquarter fillet
Energy	kJ	537	620	770	1000	653
Protein	g	27.7	25.2	32.4	30.1	27.9
Fat, total	g	1.8	5.2	5.9	13.2	4.8
Fat, saturated (SFA)	g	0.79	1.66	2.54	4.57	1.84
Cholesterol	mg	71.7	77	109	93.8	94.1
Iron	mg	4.82	0.66	1.9	2.38	2.12
Selenium	µg	17.7	13.7	16.8	6.6	6.5
Zinc	mg	4.23	1.17	3.6	4.99	2.81

Based on 100g of cooked venison medallion, New Zealand Food Composition Database 2018.
Source: Venison Scientific Review, February 2019

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Venison nutrition: continued

“We tried to capture anything relevant to red meat,” she says.

Overall, the research found grass-fed venison is naturally low in fat and saturated fatty acids such as Omega-3. It is also high in protein, vitamins and minerals, particularly iron, making it an ideal choice in a healthy balanced diet (see Table 1).

“Venison stands out to me as a very high-quality meat nutritionally. Every mouthful certainly counts,” North says, adding that she is eating more of it as a result of what she has learned from their work.

What stood out for her most, as a nutritionist, was that venison is such a good source of iron in an environmentally sustainable, healthy diet. This means a consumer can eat less venison to get the same amount of iron as you would from other meats.

“The iron levels were more significant, compared with other options, than I would have understood previously. It’s really relevant right now when there is a significant push to reduce the amount of meat eaten in the diet and a great strength in the story for venison,” she says. ■



Julie North is eating more venison as a result of the Foodcom research showing every mouthful of venison counts, nutritionally.

- Foodcom’s paper ‘Venison – nutrition and its place in a healthy diet’ was completed in February and the next step is to use this background information to create resources appropriate for publication and distribution.

Foodcom’s comprehensive review of the literature has found venison:

- is naturally low in fat; most cuts contain less than 2% fat (and less than 1% saturated fatty acids)
- is an excellent source of protein, with a 100g portion of cooked red meat providing 24–28g of protein
- has a ratio of 1.7 omega-6 to omega-3 monounsaturated fatty acids (a ratio of less than four is recommended)
- is one of the best dietary sources of iron; the iron is present in haem form, which is easily absorbed
- is a good source of B vitamins (B2, B12, B3), providing more than half the daily requirements of B12 and B3 and a quarter of the daily requirements of iron, zinc, selenium and riboflavin (vitamin B2) in a 100g serving
- is a great food for toddlers and children, providing quality protein for growth, along with B vitamins, iron and zinc; adequate iron and zinc intake is particularly important to promote optimal development in this age group
- can make a significant contribution to iron intakes in pregnant women
- is nutrient dense – important for the diets of older people
- is ideal for those on cholesterol-lowering or weight-reducing diets.

Venison market update

THENATIONALAVERAGE published schedule continues to ease back, down 13% on the same month last year, but still 14% higher than at the same time in 2017 (Figure 1).

High prices were paid in 2018 in the United States for pet food products (bones, fat, mechanically deboned meat), representing almost 20% of the carcass volume. As contracts were renewed at the end of 2018, prices reduced as a few petfood manufacturers switched to a cheaper protein source or reduced the amount used in their formulation.

Prices in Europe have eased back from record highs. Venison consumption at the start of the year is low. Several importers had frozen stock left over from the game season, which has seen venison export volumes reduced. For January and February, total frozen exports were down 366 tonnes, with Germany taking 120 tonnes less than last year, while Switzerland and Belgium each imported 50 tonnes less.

Although prices have eased, exporters report that venison demand remains strong and they look forward to continued high pricing. ■

Figure 1: National published schedule: 2014–2019 (monthly averages).



Velvet market update

THE NEW ZEALAND velvet industry continues to grow to meet increasing demand and production in this country is now at levels many wouldn't have thought possible a few years ago.

Reportedly prices have firmed slightly over last season, continuing the relative stability achieved over the past eight years. With production at about 725 tonnes and an average farmgate price of \$125–135/kg, New Zealand velvet is closing in on becoming a hundred-million-dollar industry.



New Origin's new velvet "energy tea".

What makes the above figures even more significant is that the products containing New Zealand velvet in the retail markets of South Korea (and China) are fast heading towards a billion-dollar industry status.

With the increasing volumes, New Zealand exporters worked hard to ensure they



New Origin store in Seoul – the tenth such store to open in the city.

found a home for their product and importantly, to keep prices at similar levels to what was achieved in the early part of the season. And there is some great work going on in Korea, especially in the health food sector. The hero brands (particularly KGC's Cheon Nok) continue to grow and the boundaries of how velvet is consumed are constantly challenged.

Innovation is infectious

The transition of New Zealand velvet from traditional medicine ingredient to celebrated ingredient in sophisticated health food products has been amazing. And the methods of consuming New Zealand velvet haven't stopped there. You can now go into one of the most sophisticated cafes in Seoul, order your organic eggs and free-range bacon and complement it with a refreshing iced velvet tea!

Or perhaps you are going to a high-end cosmetics shop in Taipei or Shanghai. There is a chance that among famous brands such as, Chanel, L'Oréal, Estée Lauder, or Givenchy, you will find a well-respected Korean company prominently displayed. The interesting thing about this cosmetic brand (parent company is LG) is its purported use of New Zealand velvet in its luxury products. ■



Department store at Taipei 101 featuring cosmetic products containing New Zealand velvet.

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Chowing down on deer dung

by Phil Stewart, *Deer Industry News* Editor

Dung beetles are developing a taste for deer poo on the farm of Pete and Sharon McIntyre, east of Gore – not far from where the first dung beetles to be released in New Zealand were let go in 2013. The couple have been interested in the beetles for a while and, after seeing them at last year’s Mystery Creek field days, decided to give them a go.



The beetles on arrival. Photo: Sharon McIntyre.

THEIR MOTIVATION FOR introducing the beetles was partly environmental but also for animal, soil and plant health.

The beetles introduced on their property are *Onthophagus taurus*, a 9mm beetle from south-west Europe active from spring to autumn and suited to heavy clays, silts and loams. *O. taurus* is one of eight dung beetle species currently supplied to New Zealand farms by Dung Beetle Innovations (dungbeetle.org.nz). The West Auckland-based company was formed in 2014, after approval to import dung beetles to New Zealand was given in 2011.

One motivation for the introduction was to remove some of the dung from pasture and thus some of the parasite loading. *O. taurus* are tunnellers, not the ball-rolling type, and dig down 10–20 cm into the root zone, where they place eggs inside capsules of the dung they’ve gathered. Larvae feed on the dung they’ve been placed in before pupating and hatching. The adult beetles, which fly to find a mate, have a lifecycle of 8–10 weeks and two or three generations per season, overwintering in the soil as larvae.

The beetles create aeration tunnels in the soil and, by removing dung from the surface, also reduce potential *E. coli* runoff from pastures during their active period.

The McIntyres have received two separate shipments of the beetles, which arrived by courier and were packed into a type of vermiculite mix.

This particular species was recommended for them because they are suited to sheep and deer, and their environment. Cattle require different species. The latest shipment was introduced in mid-February and another shipment a few weeks earlier for the other half of the farm.

It’s easy to see where the beetles have been busy because they leave a fibrous residue, or “frazzled poos” as Sharon McIntyre describes it. “We were advised to release them in a central paddock in warm and sunny conditions with reasonable shelter. We’ve already seen evidence that they’ve spread to neighbouring paddocks.”

She was surprised at how active the beetles were when she opened the courier package. “The mix they were in was heaving. We had to round up quite a few after we opened the box inside!”

Introducing them required a bucket of fresh deer faeces – nice and moist and less than 12 hours old. The beetles are placed onto the pat and more faeces piled on top – not everyone’s idea of a great first day on the job, but the *O. taurus* seemed happy enough.



Onthophagus taurus, suited to deer and sheep and the Southland environment.

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Well I'll be dunged

Did you know that:

- There are 7,000 species of dung beetle and they are present on all continents except Antarctica.
- New Zealand has 15 of its own species of dung beetle, but they are adapted to forest environments, not open pasture.
- There are three broad types: dwellers (live within dung pats), rollers (roll balls to bury away from the pat) and tunnellers (including *O. taurus*).
- Dung beetle species have evolved to suit many types of environment; some are active in winter, while others breed in the warmer months; some are active during the day, others at night and others at dusk and dawn.
- *O. taurus* is the smallest and one of the more short-lived of the eight species available in New Zealand. The giant 22mm *Copris hispanus* can bury its way down to 40cm, while *Bubas bison*, which is only active between dusk and dawn, can live up to two years – a Methuselah in dung beetle terms.

Source: dungbeetle.org.nz ■



It's a crap job, but someone has to do it: A dung beetle (arrowed) explores its new Southland environment. Photo: Sharon McIntyre.

It's that time again! The MSD Animal Health Photographic Awards are on again this year, so let's show them and the world what makes our animals and industry so special.

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For an entry form contact:

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Photo: "Misty stags" by Mark Tapley. Winner 2018.

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What happens when your environment plan is audited?

by Phil Stewart, *Deer Industry News* Editor

Mentioning the words “audit” and “regional council” in the same breath is likely to provoke eye-rolling and elevated blood pressure amongst some farmers. But deer farmer Stu Stokes recently hosted not one, but seven auditors at his mid-Canterbury property and found that, on the contrary, it was actually a positive experience.



From left: Jeska McHugh (ECan Senior Environmental Initiative Adviser), Ian Brown (ECan Principal Land Management Adviser), Stu Stokes, Janet Gregory (NZ Landcare Trust) and Sylvia McAslan, ECan Land Management Adviser, Selwyn Waihora).

STOKES HAS COMPLETED a Farm Environment Plan (FEP) using the Beef+Lamb template and is on the way to applying for a farming consent. Having an interesting property with various environmental challenges, he could provide an ideal setting for Environment Canterbury (ECan) to run a mock audit of the plan in a real-life situation.

Led by ECan Principal Land Management Adviser Ian Brown, the seven auditors visited Stokes’ Riverslea farm at Sheffield on 18 March. Janet Gregory of NZ Landcare Trust, who attended the mock audit day, then led a well-attended field day for local deer farmers on 4 April, where they got a first-hand look at the audit process and the pertinent issues on Stokes’ farm. (Silver Fern Farms’ Rusty Andrews was also in attendance with the trusty BBQ trailer to provide a welcome feed and refreshments at the end of proceedings.)

The discussion on the day helped demystify the process of putting together a Farm Environment Plan and the subsequent consenting and audit process (where required – not all Canterbury farms will need one). There was plenty of good advice forthcoming on ways to make the whole process easier.

ECan’s Ian Brown said the comments and gradings given by the seven auditors were quite consistent, which was a good sign.

The Farm Environment Plan

Stokes’ FEP begins with a series of farm maps and resource chart that breaks the farm into land management units (LMUs) – areas or resources with similar characteristics (topography, land use, soils and so on) – and spells out the environmental strengths and weaknesses for each. The LMUs include watercourses and mahinga kai (the value of natural resources that sustain life and provide food).

It then spells out a series of high-level environmental objectives for management areas such as nutrient and soil management, documenting the practices being used to help achieve these. And most importantly it asks how you can demonstrate that you are doing what you say you are (e.g. stock records, correspondence, photos).

Finally it lists additional actions or targets needed to achieve those overall objectives, using good management practices, putting a timeframe and priority level around them. Once listed out like this, these actions – e.g. getting an Overseer® report done or changing from cultivation to direct drilling – can be fed into the farm’s annual work plan and budget.

The Deer Industry Environmental Management Code of Practice is an excellent resource for helping flesh out an FEP.

Wait! There’s more: Plan Change 5

ECan has recently released a Plan Change 5 addendum for farmers using the Beef+Lamb FEP workbook, which teases out some additional information and actions. While it could be seen to add to the work burden, the addendum also provides scope for extra detail that gives the environmental plan more meaning, with more specific actions, such as dealing with a critical source area, that can be fed into a farm’s annual



Stu Stokes: Found the mock audit a positive experience in the lead-up to applying for a resource consent.

plan. For example, in Stokes' case, using a bucket test to check the performance of irrigation equipment, and use of soil moisture monitoring were added under the irrigation management area.

How the audit works: document everything!

The FEP audit is an on-farm assessment of how well a farm is progressing towards meeting its environmental objectives. In Canterbury they cost \$1000–\$2000 and the auditors are independent of ECan. (There are currently 24 certified auditors.)

Ian Brown stressed that the important thing is not so much how close you are to your goals – it's more about what you're doing to get there and whether you're trending in the right direction.

There are four overall grades possible in an audit: A, B, C and D. The mock audit at Stokes' farm gave a B grade, a pass mark that acknowledges there is still work to be done on good management practices, but that progress is being made towards addressing the issues. A result of C or D would be a "fail" and would trigger more intensive follow-up. Brown said one of the main differences between a B and C grade is the degree of planning evident to address identified issues. With a B grade there is evidence that plans are in place. For a C grade there is no evidence of plans in place.

Achieving an A grade on audit will mean a three-year gap before the next audit. This is reduced to 2 years for a B grade, 1 year for a C grade and 6 months for a D.

A result of C or D would be first a visit from a regional council land management adviser and, following a second fail grade after another audit, a compliance visit from a regional council resource management officer, and the building of support from industry organisations working with a regional council panel and others to help a farm get over the line.

The audit goes through all of the management areas listed in the FEP, and lists reasons to support an assessment and against an assessment. Often the reasons against are simply that work wasn't documented or hasn't begun. There's also a qualitative assessment applied, where the auditors state their level of confidence in their assessment (low, medium or high). This reflects the amount of evidence in front of them that an objective (e.g. a change in fertiliser application practices) has actually been met. Saying "just trust me on this" generally won't cut the mustard – you need proof. If the auditors' confidence level that objectives are being met is high across all areas, a farm would qualify for an A grading.

One important point about the whole audit process came up repeatedly during the day: document, document, document! Both Brown and Stokes emphasised that it's important to keep all records that help show the auditor what's been happening on the farm. "The evidence needed to support an evaluation needs to be more compelling than a nice morning tea," Brown said.

Evidence used could be as simple as a receipt from a recycler for chemical drums you'd handed in, or photos taken through the year showing physical changes or progress on work. Stokes said a simple example was when he left a hollow alone during spraying out of a paddock. "That wouldn't have been so obvious later when the auditors came, but I could show what happened at the time with a photo taken on my phone."

Brown said the auditors rely on a combination of this

documentary evidence and what they see in the field, plus discussions with the farmer about their farm system and its interactions with the environment. Each process (paperwork and farm inspection) typically takes 1–2 hours, although the farmer will need to do some preparation to have all the relevant records on hand.

Stokes said having a positive attitude and taking ownership of your environmental issues with a plan to address them was a big part of a successful audit process. The other main part was the good documentation.

Consenting

The trigger levels for needing a land use consent vary depending where you are in the region. Brown said most farming operations, particularly those with irrigation, will need a land use consent, "but if you are not sure, give Environment Canterbury a call".

The average cost for consents paid up front will be \$2350, although this will be adjusted up or down in individual cases once the consent is completed. In Canterbury, once an FEP and Overseer nutrient budget for a property are approved and a consent has been applied for, the audits will begin for real within 12 months of the consent being granted.

Farm profile

Riverslea Enterprise Ltd is a family-owned business run by Stu and Julie Stokes at Sheffield, near the Canterbury foothills. It came into the family in 1987 and Stu and Julie moved there in 2003. Various stock classes have been tried over the years, including sheep and dairy grazers, but the enterprise has now settled down to mainly deer (velvet and venison) with some beef cows and cereal cropping.

Home block:

- 233ha (204 eff); flat; includes 74ha centre pivot irrigated, river terraces and dryland
- permanent river (Hawkins), ephemeral streams, water races, spring-fed streams and ponds
- pasture, lucerne (some with plantain and grasses), fodder beet, swedes and cereals (barley).

Run block:

- 140ha (130 eff); rolling
- very wet in winter
- includes small forestry block, two ephemeral streams and several critical source areas
- stock water from county scheme.

General:

- Six soil types over both blocks ranging from silt loams to heavy clays and iron pan
- 900mm/year rainfall falling out of summer safe and tending summer dry.

Livestock:

- Hinds: 1338 (MA 595, R2 318, R1 425)
- Stags: 665 (R2 230, R1 425)
- Beef cows: 102 MA.

Labour:

- One worker for 6 weeks in summer, otherwise self sufficient; use of contractors minimal.

continued on page 24

Environment day: continued



Stags on the Riverslea home block.

General observations

Stu Stokes had a number of observations on environmental matters during the field day:

- Other than for straight pasture or lucerne, Overseer is a difficult tool to use, for example with cropping or with lucerne when it's grown in a mix with plantain and grasses.
- Everything possible is recycled on the farm: twine, baleage wrap and chemical drums.
- Hinds are run on fodder beet and swedes in winter, supplemented with plenty of barley straw to keep them full. Stu does not like tight breaks in crops over winter ("controlled starvation" in his view). He gives generous space and moves breaks about once in five days. Stu notes that deer prefer to rest up in flat areas with no crop, where they feel more secure.
- After hinds come off crop in about September, they are moved to the run block for set stocking. Weaning is as early as practical in late February and some barley is fed from January on if needed. Hinds come back to the home block in June.
- Wallows are recognised as an animal welfare necessity; Stu fills them with stone where they are likely to connect with



This spring-fed waterway on the home block feeds into a large pond, and has been well protected from livestock.

- waterways, but otherwise not.
- Fence pacing is only a problem where deer are underfed and is not an issue of note at Riverslea.
- If you are having to deal with sediment from an upstream neighbour, "you need to have a conversation". If all else fails, a sediment trap to deal with the outflow should be as close to the boundary as practicable.
- Weed control along fenced-off waterways is an ongoing problem. Sheep can be used in some cases but they are prone to falling in and drowning (there are no sheep at Riverslea).
- District councils sometimes have funding available to help preserve native vegetation remnants.
- The ephemeral streams on the run block are problematic and may need fencing off. This could exclude deer from the shade and shelter provided by willows, which would need to be provided another way.
- It may be necessary to build a sediment trap for the run block, which could be a major investment.
- A good farm map is essential for your FEP and eventually getting a consent and being audited. It needs to tie in with fertiliser contractor's system so applications can be accurately recorded.

A valuable day

Local deer farmers attending the field day were fully engaged and had plenty of questions for Janet Gregory, Stu Stokes, Phil McKenzie (DINZ) and the three ECan staff in attendance.

Lindsay Hills, who farms at Mount Thomas, said the field day gave him the confidence to progress with his FEP and especially valuable was advice that he could build a sediment trap below a block of trees that has a stream running through it. "I was worrying about how I could deal with the sediment coming out of those trees and this advice has shown me what I can do."

Locals Mike Smith and Stu Baxter both said the day had made them feel a lot more positive about pushing ahead with their FEPs. "It was good to see things explained in practical terms and see the different risks and hazards on another farm that's going through the same process," Baxter said.

Phil McKenzie, who is working part time with the P2P Programme setting up Deer Industry Environment Groups (DIEG) said there was strong interest from attendees and as a result of the day there had been enough interest to form another Canterbury group. Members of DIEGs join with the aim of developing an FEP for their property. "It is a DINZ and DFA objective that all New Zealand deer farms have an approved FEP by 2020, so this initiative by the branch to get more farmers into environment groups, learning about good management practices and preparing and implementing FEPs is great to see," McKenzie said. ■



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