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Deer Industry News

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Cover: Dr Lee (centre), who distributes his velvet-based products through Lotte Home Shopping Network, interviews Grant Charteris (left) for a video on a recent visit to New Zealand. Interpreter "SJ" is on right. Dr Lee's NZ velvet is imported through PGG Wrightson.

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Market diversification is happening

I was in Atlanta last September with my US-based colleague, Angus Cleland, and production manager Shane Webster. As we returned to our hotel after a busy day of meetings, the significance of what we learnt began to dawn on us.



John Sadler.

WE HAD BEEN producing steaks for the US fast food chain, Arby's, for six months and those steaks were about to be sold through 3,300 stores across the country. They expected to sell out in less than a day.

In the media monitoring room at Arby's Atlanta headquarters we saw first-hand the daily social media activity the company observes and participates in. From coast to coast, followers were commenting and offering feedback to each other and to Arby's on what they liked and didn't like. Arby's in turn responded with messages of support, inspiration and humour. We learnt that the response to the venison sandwich trial was significant. In fact, it was the thirdmost commented activity Arby's had experienced in any social media campaign. The number of posts and tweets ran into the hundreds of thousands and were mostly positive (see also

Selling more leg cuts in the US market has long been the marketing goal there. In fact, with deer numbers down, loins are fully absorbed by the top end of the foodservice market, so the only opportunity to grow sales is by doing more with other parts of the carcass. Convincing chefs that leg steaks are every bit as good as loin cuts is challenging at best. And yet they are constantly amazed by the tenderness and flavour of dishes using leg cuts.

Are we at a turning point? I immediately thought it was a pity this didn't happen five or ten years earlier. Yet even now, the significance of, and opportunity arising from, the response to Arby's success with venison is huge for our industry. From a marketing and business perspective, it highlights once again the potential of our product. There is clearly a latent demand for venison. The Arby's promotion ought to open doors for our product where previously there had been doubt and reluctance because venison was too "exotic".

Venison exports to the United States were steady at 1,000 tonnes (between 5-7 percent of New Zealand exports) from the late 1990s through to 2011, then started to climb toward 2,700 tonnes in 2016 and accelerated to 3,300 tonnes in the year to September 2017. Growth from a historic position of 5-7 percent of New Zealand venison exports to nearly 26 percent today is phenomenal and confirms exciting things are happening.

A significant source of the volume growth has been an explosion in demand for manufacturing venison. The output ranges from snack bars to gourmet burgers. Even cats and dogs have a penchant for venison, with recent price developments resulting in a battle for supply from the pet food industry.

More steady growth has been achieved in the foodservice sector. Long-term industry commitment to the Cervena® programme has seen the opportunity to carve out a niche for our product realised.

Through the P2P programme, the industry is committing to opening new frontiers for New Zealand venison. We are participating in the programme in China, while industry colleagues are in involved in Europe. China will be a big market in future. Initial research suggests the foodservice market in China is quite similar to other markets we operate in. Everything we are doing now can be used to leverage our business in most markets.

The goal of market diversification is well in train.

John Sadler, Marketing Manager, Mountain River Venison

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Plenty to smile about at October meeting

The annual NZDFA Branch Chairs' and New Faces Meeting has evolved over the years into an intensive and constructive exchange of ideas. Those who made the trip to Wellington this year were rewarded with some quality discussion and plenty of good information to take back to their branches. Youth and leadership were strong themes, building on the energy shown at the NZDFA's successful Next Generation programme two months earlier. *Deer Industry News Editor*, **Phil Stewart**, sat in on proceedings.

Leadership and communication

Three contrasting speakers got the meeting off to a flying start. **Dr Scott Champion**, best known to the deer industry in New Zealand for his seven-year stint as CEO of Beef+Lamb NZ, said he was a city kid growing up in Australia, but had enjoyed a successful career in the primary sector thanks to key people "showing leadership by giving me a go".

Like others, he's had bouts of "imposter syndrome", but said future leaders need to stretch themselves to take the opportunities offered to them. He said a lot of valuable leadership work in the rural sector was done quietly and "below the line", working within communities.

While some preferred a competitive "go-it-alone" approach, Champion said the best solutions to big problems – like improving water quality in a catchment – could come through a collaborative approach where no one person has all the answers. "Leadership is a team sport and collaboration has to be learned and developed," he said.

Problem solving and decision making were important skills, but sometimes the threshold for decision making is not crossed. "Even after a great meeting there can be no clarity about what happens next."

He said people often work in silos and emphasise differences. "Often we can agree on 80-90 percent of the issues, but we can get distracted by the remaining 10-20 percent. If you focus on the commonalities first, it's easier to collaborate and tackle the other issues. That builds momentum and trust."

DINZ Deer Health Programme Manager, **Lorna Humm**, talked about her recently-completed Kellogg Rural Leadership Programme project, *Deer Industry Leadership: Design Thinking for Communication and Engagement*.

She said the programme was challenging physically as well as intellectually – participants were pushed well beyond their comfort zones with high-rope team-building exercises. Her project explored communications needs and strategies in today's world, and involved interviews with 14 primary industry organisations, communications consultants and 26 farmers.

Her research boiled down to three main findings – all relevant to the deer industry:

1. The world is getting faster. Attention spans are short, so information needs to be timely, brief and visually compelling.

- 2. The younger generation are keen to make a difference and will feel fulfilled if they feel they've contributed to change.
- Connectedness through social media is the norm and a
 powerful means of peer-to-peer learning.
 For organisations in the primary sector that are communicating
 with a wide audience to influence the "brand" of an industry,
 Humm recommended:
- an independent communications audit
- ensuring the communications manager has a senior role
- a comprehensive communications strategy including social media policy.

She urged the deer industry to use these concepts and principles at local level when encouraging the next generation of deer farmers to come forward and get involved.



From left: Scott Champion, James Robertson and Lorna Humm.

The third speaker, **James Robertson**, epitomised the millennial generation that Champion and Humm had talked about. (He is, incidentally, the older brother of William Robertson, who was sponsored by DINZ to attend the 2017 Next Generation Programme.)

Robertson is a Bachelor of Agricultural Commerce student at Massey University looking at international supply chains, and was 2017 Massey agricultural student of the year. He took part in the recent "Big Deer Tour", designed to introduce young high achievers to the deer industry. He's involved in Young Farmers, which brings in youngsters as early as 7 years of age through its AgriKids and TeenAg programmes. Robertson urged deer farmers

to encourage their staff to join Young Farmers.

He was selected among six New Zealanders to attend the international Youth Agricultural Summit, an experience that gave him a passion for youth leadership. "Big ups to your industry for organising the Big Deer Tour," he said. Six final-year farm management students were taken on a comprehensive familiarisation tour with everything from visits to Raincliff Station, AgResearch Invermay, venison marketing companies and even a venison cooking class (see http://bit.ly/2yKnBei for the participants and their reactions).

"It was a fantastic week and had definitely had an effect on my career choices."

Robertson said he was impressed at the depth of experience in the deer industry, but urged the older generation to do more to pass that experience on – "before it's too late," he added ominously.

"The next generation can bring in fresh ideas and challenge the status quo. We don't mind if the leadership is mature, but we need to understand why decisions are made."

He said social media like Facebook was "the new email" and could be a force for both good and bad – good by sharing new ideas quickly, but bad of negative images get into the public domain and go viral. (Lorna Humm noted how effective the Next Generation Deer Farmers Facebook page was for helping coordinate immediate relief efforts after the 2016 Kaikoura earthquake.)

Robertson said young leaders in the deer industry need to be created through exposure to new experiences, being given opportunities and by being inspired to take up these opportunities. Potential new leaders often needed a "shoulder tap" to encourage them into new roles. "Next time you are at a gathering of deer farmers, talk to the youngest person there. They will probably be the shyest, but it's up to you to stop them feeling left out."

Velvet outlook positive

Even by mid-October, prospects for the upcoming season were positive, said DINZ Market Manager Asia, **Rhys Griffiths.** The risk from regulatory changes last season had largely been mitigated in New Zealand, although Chinese importers were still having to use a regulatory "work-around" to keep operating.

Griffiths said it was important to avoid the big price swings of a decade ago. Prices dropped too much last season and he said it was pleasing to see a recovery this year. However the size of price fluctuations can become an issue, he warned. For the previous seven years, prices had been stable, slightly firming each year. And while underlying demand for New Zealand velvet is strong, dependence on commodity traders is still too high. Some traders profit by price instability, he said, noting that last season's price drop was unrelated to supply/demand balance but was rather an overreaction to regulatory changes and capitalised on by some traders.

The industry was now selling about 675 tonnes of velvet a year. About 150 tonnes of this goes into healthy functional foods, up from 100 tonnes two or three years ago. Griffiths felt there was potential to steadily grow overall New Zealand production, as long as the supply growth doesn't outpace demand growth. "Overall there appears to be no oversupply currently. Demand is growing and while supply is growing in New Zealand, competitor countries have seen declines in production."

He said the upgrades being done in deer sheds under the Regulated Control Scheme (RCS) presented a great marketing opportunity. "The companies and importers love what's being done on farms." Companies were actively promoting New Zealand as a source of safe, traceable, natural food products. This was captured in a new generic New Zealand Deer Velvet brochure with the tagline "Naturally the best choice".

Naturally the best choice



Brochure promoting the natural qualities of New Zealand velvet.

Korea had been seen as a mature market for velvet, but there was actually room for more growth, especially with the development of new healthy food products incorporating deer velvet (see article on Memorandum of Understanding with Yuhan Corporation on page 37). Griffiths said there are opportunities to work with Korean marketing companies to grow velvet consumption through their subsidiary companies throughout Asia.

He repeated his plea for velvet producers to support companies that had a long-term commitment and investment in the industry. "Avoid guys coming up your drive with bags of cash."

PGG Wrightson Deer Velvet Manager and DINZ Board member, **Tony Cochrane**, noted that buyers in China and Korea had different requirements. Korean buyers would take the whole stick, while Chinese buyers favoured the tips, so bought a lot of RG1, Spiker 1 and A short or B short velvet. He said currently Korean buyers had fastidious standards, to the point of deducting the few grams' weight of velvet tags when weighing and paying for velvet sticks.

NVSB: Impressed with upgrade work

DINZ Quality Assurance Manager, **John Tacon**, and NVSB farmer committee member, **Paddy Boyd**, updated Branch Chairs. Boyd said the NVSB's role was to make sure the RCS changes were

continued on page 6

Branch chairs: continued



Clean zone in an upgraded shed.

feasible for farmers. "We have seen a lot of kiwi ingenuity at work [as farmers upgrade their sheds]," he said. "One velvet buyer has visited 200 farms and found only three had a negative attitude to the change. The vast majority were keen and proud."

Tacon said it had been refreshing to see how many farmers were making good progress on shed upgrades. "We are auditing only 300 deer sheds this year, but that doesn't mean the other 600 sheds will miss out," he said. Every one of the 900 deer sheds known to be used for velvetting was required to have upgrade work started by August of this year and all will have been audited once within three years. Any upgrade work required must be completed this year, whether sheds have been audited or not. Nobody has been given three years to make any changes required.

"If you have made a start on this work you can tick 'Yes' [in the appropriate place] on the Velvet Status Declaration." He added that a floor plan of the shed showing the clean zones and displayed in the shed was part of the requirements. Velvetting records and the VSD records should be kept with the plan.

Ian Walker, who does NVSB audits, said the lack of this plan was a common oversight. He said about half those he has audited pass straight away, with most of the rest able to pass with only minor changes. A small number of sheds needed completely replacing, but people who have made a real effort can take great pride in what they have done. "I've seen some amazing clean zones."

"Anyone who refuses to have their shed audited or says they won't comply will go onto a critical list. No product harvested in their shed will be able to be sold," Tacon added. He said white paint wasn't required. "The RCS doesn't stipulate colour."

The long and confusing list of approved maintenance compounds had been replaced by a shorter list on the DINZ website (http://bit.ly/2yKPWkB).

Plastic covered bins were okay as receptacles to take velvet from the yard to the freezer. Large plastic bags available in batches of 50 for about \$8 from a hardware store were acceptable as covers to protect velvet in open bins. Velvet can be transported from the shed to a freezer in a covered ute provided it was properly cleaned. However velvet cannot be carried on an open deck of a ute or trailer.

It was noted that all velvet must still be tagged, using tags supplied by the veterinarian when drugs are provided. It wasn't

necessary to record individual tag numbers on the VSD, just the sequence.

Venison continuing on a high

As the Branch Chairs' meeting came during the interregnum between the departure of Venison Marketing Manager Marianne Wilson and the arrival of her replacement, Nick Taylor (see introduction to Nick on page 24) DINZ P2P Manager, Innes Moffat, stepped into the breach to report on the venison market. His report continued the good news of recent months:

- venison prices tracking between \$9.85 and \$10.20 (see Market Report on page 39 for latest prices)
- increasing volumes to the United States and falling volumes to Europe
- diversion of cheaper cuts from Europe to the USA, meaning people such as salami manufacturers in Germany miss out
- prices in Europe up between €1–3/kg
- cheaper cuts like venison trim are getting more in the United States as pet food than if sold for human consumption, but there is a note of caution about being priced out of the pet food

Moffat said venison may get priced off menus in some places, but overall there was little risk of carryover stocks building up. He said the latest wildly successful Arby's venison sandwich promotion showed others in the US foodservice sector how popular New Zealand venison could be.

The US market was much less seasonal than in Europe, another objective being sought by New Zealand exporters.

While there were always inherent risks in the markets, Moffat was confident there wouldn't be any sharp price corrections for venison in the near future. Good prices for other game meats like Roe deer indicated the overall market in this sector was strong.



Strong demand for New Zealand venison is continuing.



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Branch chairs: continued

P2P report

Moffat quickly shed his venison chef's hat and donned a P2P cap to report on the Passion2Profit programme.

Market opportunities

While China held some promise as a market, there were many barriers and the Market Working Group was taking time to make sure that the right messages for the right niche are understood before committing more resource in that country. Another segment worth exploring is the nutritional supplement market for people like body builders looking for sources of pure protein, or venison bone broth for the "wealthy worried well".

Cervena® distribution in Europe

The 90 tonnes sold in the Benelux zone this year was a small but positive step forward in establishing a European summer market for chilled venison. Moffat said the aim was to match the prices achieved during the traditional European chilled season. High prices next year could dampen demand in the northern summer, however.

Industry-agreed standards (IAS)

These are now being used in the quality assurance programmes of the five main venison exporters. In addition, three companies have signed up to the Red Meat Profit Partnership's (RMPP) Farm Assurance Programme, which will provide the mechanism for auditing to take place. The other two companies are following the deer industry IAS. Moffat said the five companies would progressively introduce a requirement for farms to be QA-approved in order to supply them with deer for Cervena.

Production overview

Initiatives to help the deer industry achieve its objectives have included:

- training for rural professionals (seven one-day workshops)
- collaboration with RMPP on business planning tools/processes to ensure deer are included
- attendance at the NZ Institute of Primary Industry Management conference
- · the Big Deer Tour.

Practice change

Twenty-six Advance Parties are now up and running, there have been 18 P2P Regional Workshops and also three Deer Select meetings.

Technology packaging

This includes packaging of various tools, for example the new Mate Allocation Calculator, growth target calculators for venison or replacement hinds, a feed cost calculator (currently being tested), a forage planner, a deer system planner (in progress) and the deer health review.

Moffat said environmental stewardship was the "new kid on the block" in the P2P programme. A major initiative here is the production and distribution of the Deer Industry Environmental Code of Practice. A group was also looking at the industry's future needs in this area.

OSPRI news

Stu Hutchings, OSPRI Group Manager, Programme Design & Partnerships, briefed Branch Chairs on the latest phase in the eradication of bovine TB from New Zealand.

He explained the first objective of the original TB Plan in the late 1990s was to stabilise the challenging situation with 1,700 infected herds. The next phase was from 2002–2011, when the period prevalence was brought below the 0.2% threshold. From 2012–2015 a proof of concept for the eradication of TB was successfully executed ahead of target. The latest and most ambitious programme – total eradication by 2055 – is under way.

Hutchings said zero infected herds by 2026 was an important milestone on the way towards this goal, something he admitted is a "stretch" goal (there were 54 infected herds at present including one game estate and five deer farms, all in the South Island).

The next significant step comes in 2040, when the aim is TB freedom in possums. This was another "stretch" goal, especially considering areas like the Kaimanawas that have never had vector control.

New Zealand has now being split into 120 TB Management Areas (TMAs), with an eradication plan and a pest control procurement strategy for each.

Risk-based testing would continue and would focus on an animal rather than a herd level. Hutchings said that if testing is withdrawn in an area, it will need to be balanced by meat plant surveillance. A one-to-one relationship between TB herd and NAIT data would help tighten the screws on the disease. Hutchings said the key was probability of detection of TB, and the programme was designed to ensure that the combination of testing and surveillance gave the coverage needed.

Collaborating with DoC and its "battle for the birds" and the Predator Free by 2050 strategy was also helping in the fight to eradicate TB.

One upcoming change was a move away from user-pays TB testing for the deer industry, so that it would be paid for by the



TB freedom in possums by 2040 is a significant target.

TB programme. At present, testing deer is shared 50/50 between AsureQuality and vet practices, and OSPRI would be looking at the best way to continue in order to maintain tester capability into the future. It is likely that changes to this procurement model would come into effect early in the New Year.

Government-Industry Agreement

DINZ Policy Manager Catharine Sayer told Branch Chairs that the deer industry is proposing to join other primary sectors by signing a Government-Industry Agreement (GIA) on biosecurity readiness and response. She said that even if the deer industry declined the offer of a GIA, it could end up having to pay some of the costs associated with a biosecurity response in the event of an exotic disease incursion affecting deer.

A GIA is a voluntary contract where each party's responsibilities are spelled out. It's been a non-partisan issue: the concept started under the last Labour-led government and was continued under the National-led regime. The principle is that costs of biosecurity readiness and response aren't borne equally by all taxpayers when particular sector/s derive specific benefits.

Sayer said the benefits of a GIA included:

- the industry gets to take part in decision making about biosecurity readiness and response
- industry prioritises the most significant pests or diseases
- costs are allocated only for those priorities
- cost sharing is proportional to the benefits for a particular sector and is never more than 50 percent
- the sector specifies a cost ceiling
- the Government is accountable to sectors
- signatories have some influence over border and pre-border

The "not-so-good" bits of a GIA included:

- the Government may disagree on priority pests and diseases
- a minimum commitment is required on signing
- a sector cannot compel government action
- influence on measures such as import health standards is limited (these cannot be used as "technical barriers to trade", preventing imports where the level of risk can't be used as a justification)
- industries are more likely to be implicated and blamed for unpalatable responses such as mass slaughter of livestock
- non-signatories of GIAs may not ever be required to pay their fair share.

Sayer said the pork and kiwifruit industry have each been hit hard by exotic diseases (PRRS in pigs and PSA in kiwifruit) and have signed GIAs – as have dairy and meat processors.

Some aspects of the GIA could be funded from existing revenue by DINZ, with "maintenance" expected to cost \$8,000-\$10,000 a year. On-farm biosecurity plans may be an additional cost, but this may be suitable for a template approach, keeping costs low. Sayer said these ongoing "readiness" costs were likely to be relatively modest, but in the case of an actual response, it was likely an additional levy would be required.

She said the Government's ability to cost-recover from industries regardless of GIAs having been signed means there is effectively little choice but to get on board.

The deer industry was consulted about the proposal to sign a GIA, with consultation finishing earlier this month.

Streamlining science

Catharine Sayer, DINZ Science and Policy Manager, told Branch Chairs that DEEResearch is trying to engage better with the main beneficiaries of science spending. Rather than asking what

research is needed, they are asking what information they need to unleash greater productivity. "We are going to keep interested people engaged throughout the life of a project," she said. Dialogue about the direction of resources for science would be through groups such as Advance Parties and the NZDFA Executive Committee.

Sayer said DEEResearch's themes had been simplified to just

- growing deer
- caring for deer
- caring for customers
- caring for the environment. VARNZ had also streamlined its themes, using just three:
- profitability
- maintenance or generation of market access
- freedom to operate.

Holus bolus

AgResearch's Dave Leathwick updated Branch Chairs on work to develop a deer-specific "mini-bolus" using a dual combination BZ (albendazole) and ML (abamectin) treatment. Earlier work in sheep had shown that such a dual-combination mini-bolus had been extremely effective compared with an oral dose using the same chemicals, or a single moxidectin drench.

But deer, as Leathwick is discovering, are a bit special. They don't respond to treatments in the same way - or at least the worms they have on board don't. It was known that the longer exposure of worms to a drench chemical via repeated smaller doses could give a better response than a single larger dose of either albendazole or abamectin. So far, so promising.

When this principle was applied by putting the two chemicals into a mini-bolus to treat deer, however, the bolus results fell slightly short of an oral drench. On three different properties, the dual combination was tested against Ostertagia-type gutworms, both as a mini-bolus and as an oral drench. Against expectations, the oral combination (efficacy 98.7-98.8%), in which both drugs were given at twice the recommended label dose, outperformed the mini-bolus (efficacy 94.3-95.4%, just hovering on the efficacy threshold).

Leathwick was a little disappointed but not deterred. He said that in deer, the maximum level of drug in the plasma seems to be important, and monitoring during the trials showed that the plasma "peaks" for the two drugs were much lower than in the oral drench.



The mini-bolus: Potential to improve performance by increasing amount

Branch chairs: continued

"The bolus is delivering less drug than the oral treatment," he said. "We can probably improve the performance by increasing the amount of drug in the bolus."

Deer-specific drench formulation moves closer

Veterinarian **Dave Lawrence** reported promising preliminary results in tests to develop a deer-registered triple combination (white + levamisole + mectin) drench. He said a small New Zealand company is interested in getting a product to market, with DINZ support through the registration process.

The criteria for a product are:

- effectiveness against both lungworm and enteric parasites
- · delaying the development of resistance
- a practical withholding period of 21 days (especially for use in spring)
- practical application method preferably oral.

An autumn slaughter trial at Te Anau on one farm was done using a bespoke triple oral combination (Lawrence is a firm believer that levamisole has a role by helping "confuse" parasites as part of a triple combo). The 30 trial animals had massive Ostertagia-type worm burdens and were slaughtered 14 days after treatment. Preliminary results for two different formulations (the amount of moxidectin was varied) showed very encouraging results, with worm kills of 96.2% and 96.7%.

Lawrence said statistics work was still needed to validate the results and the efficacy trial would have to be replicated next autumn, but the results were encouraging thus far. Safety and residue trials will also be required before registration can be initiated.

Reliable bioassay for Johne's elusive

When Johne's disease (JD) resistant and susceptible bloodlines were identified in the Peel Forest herd some years ago, it looked as though there was a pathway to developing a bioassay that could predict an animal's response to disease challenge. This was exciting stuff and did help researchers identify five immune system genes that seemed to indicate whether an animal might be unusually resilient or susceptible to JD.

The next step was to trial this approach with animals from other herds, looking at the activity of these particular genes and then seeing if it would help predict their response to a JD challenge. **Rory O'Brien** from Disease Research Ltd told Branch Chairs that the results of a recent trial incorporating a broader variety of pan-industry genetics were not as clear cut as hoped.

The animals recruited for the trial were predicted to be either strongly resilient or susceptible to JD, but the results were equivocal. "We weren't able to separate resilient and susceptible animals at all – it wasn't quite what we were hoping to see."

CARLA

CARLA is an antibody that appears to help animals resist gut parasites by interfering with the worms' protective sheath. Research has shown levels of CARLA produced in sheep are quite good indicators of resilience against parasites. It has been hoped the same might apply in deer, which also produce CARLA in varying amounts. This trait is moderately heritable in deer

and AgResearch has been developing a breeding value for CARLA but it isn't known if it gives a productive advantage, or indeed a disadvantage. **Jamie Ward**, AgResearch described work to test animals' resistance to gut parasites in relation to levels of CARLA produced to try and answer these questions.

After a very preliminary look as the end of the trial approaches, the results based on liveweight or growth rate of the different treatments haven't been clear cut, with no apparent differences in performance of progeny of high-CARLA and low-CARLA sires. Ward noted that, as with all things genetic, the contribution of the dams also needed to be considered and this is unknown at present. He said much more work needs to be done, particularly analysing the saliva swabs taken to measure CARLA in the individual animals. Results of this trial are due to be reported in April, but for now, ability to produce the CARLA antibody will remain as an unofficial Deer Select breeding value until a productive advantage can be shown.

Although CARLA will not be a silver bullet that means we can stop drenching, there could be a silver lining, however. If the current trial could show that high-CARLA animals need less drenching to control gut parasites, that could create a saving in animal health costs. And utilising the deer's own immune system rather than relying on chemicals is a worthy goal.



A reduced need for this would be a win for the industry.

Environment work

Environmental issues have been given high priority by the incoming government and the deer industry's Environmental Code of Practice is timely. DINZ Environment Policy Manager **Lindsay Fung** and NZ Landcare Trust's **Janet Gregory** backgrounded the code.

Now in the final stages of development and scheduled for launch early next year, the code offers practical steps to help mitigate the environmental effects of farming practices. It focuses on areas such as intensive grazing and the protection of critical source areas like wallows or gateways.

The work builds on earlier initiatives to improve water quality and protect soils and biodiversity on farms. The first Deer Farmers' Landcare Manual was published in 2004 and updated in 2012 while the Deer Farmers' Environmental Awards to promote



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Branch chairs: continued

best practice date back to 2001.

The code distils industry experience and best practice into a farmer-friendly format using agreed good management practices. It is designed to help deer farmers meet or exceed the rules being put into place by regional councils, and create their own land and environment plans.

Topics covered in the code include:

- Farm Environment Plans (or Land and Environment Plans)
- Soil management
- Stock management
- Intensive grazing
- Water protection
- Nutrient management
- Feed
- Infrastructure
- Irrigation and water use
- Effluent and waste management
- **Biodiversity**
- Biosecurity
- Shelter
- Carbon
- Regulations.

The code of practice is being compiled by Janet Gregory with Edmund Noonan of the Canterbury West Coast DFA, and oversight by Lindsay Fung.

DeerPRO proposed to come under DINZ wing

The DINZ Board is proposing to bring DeerPRO, formerly Johne's Management Limited, into line with other industry-good functions by bringing its operation into Deer Industry New Zealand. Dan Coup explained the proposed change, saying this would bring greater transparency and accountability and provide the operation with more support.

The change would be cost neutral to farmers, who will continue to receive JD and productivity reports free of charge. The funding, currently provided through meat processors, would be rolled into the DINZ levy. The standalone company, DeerPRO Limited, would be wound up under the changes and the DINZ Board would become the governance entity for the operation. A separate Johne's disease advisory group would be maintained.

DINZ would be consulting with venison processors and the NZDFA executive on the proposal.

Neil Campbell: We can do more

Keynote speaker at the Branch Chairs' meeting was Fairlie deer farmer Neil Campbell who, with wife Lyn, was 2016 South Island Farmer of the year.

Campbell described the couple's pathway to farm ownership since the early 1980s, including a mix of equity partnership, leasing and outright ownership. They have been at Fairlie since 1993, and have since invested in forestry and a Marlborough vineyard as part of a succession plan for their three children, none of whom are farming. Recently they have leased two-thirds of the operation to a motivated young farming couple, but are staying closely involved.

He said taking part in the Kellogg programme a decade ago was life changing and opened his eyes to the meat industry, which has had to battle everything from shipping companies to cartels of



Neil Campbell: Deer return is twice that of sheep in terms of cents per kilogram of dry matter consumed...

retailers over the years.

He's developed an unsentimental and hard-nosed approach to farm business, seeing everything in terms of cents per kilogram of dry matter consumed – a metric very much appreciated in the deer industry. He's well aware that his deer return double what the sheep manage by this measure.

The farming operation has trebled its gross farm income in the past decade. The contribution of sheep and beef has plummeted in that time, with deer staying steady at a little over 20 percent. Cropping, grazing and off-farm income from the vineyard (returning at least 10 percent on capital each year) now feature strongly.

The Campbells' current farm setup incorporates 80 hectares of cropping on the lower country. With the best grain yields coming in dry years, this helps mitigates losses from livestock during drought. Like most forward-thinking farmers he appreciates the power of genetic improvement, but he reminded deer farmers not to forget this applies to plants as well as animals.

He is a great fan of fodder beet, growing 50 hectares last year. "It does as well for us as lucerne does for [Marlborough farmer] Doug Avery."

An advantage of fodder beet over kale is that it's less prone to wastage through being trampled into the ground, he said.

Campbell said their greatest resource, apart from their health, is the land. Although they farm intensively, they are careful to work within the constraints of their environment. They use OVERSEER and keep nitrogen losses to less than 11kg/ha, but he's concerned that they could get locked into this level as regional water plans are implemented. He acknowledges sediment runoff is the greatest risk from deer and has created sediment traps and planted exotic trees in slip-prone areas. A couple of areas have been retired as regenerating bush.

The fact that the world is "screaming for venison" but our herd has declined has been a source of frustration, but Campbell said there is great potential to grow more from the existing hind base by improving reproductive performance and getting heavier carcasses faster. Again, he put in a plug for plant genetics as a way to help achieve that.

Positive results for Cervena® in Europe

by Alison Spencer, Deer Industry News writer

Another year raising awareness of and demand for Cervena® in Europe has passed. Venison exporters have agreed to continue with the programme and a refreshed look for the appellation in 2018.

THE INITIATIVE INVOLVES four of the five venison exporters - First Light Foods, Silver Fern Farms, Alliance and, most recently, Duncan NZ. It aims to eventually create demand for 300 tonnes of Cervena for summer menus in Belgium, The Netherlands and

The companies presented their programmes and observations of the 2017 activities to the Marketing Working Group at the end of September.

Activities in the market included a mix of press events, liaison with bloggers, Cervena tastings, in-flight catering promotions, chefs' competitions and events using the services of DINZ executive chef Graham Brown, and Germany-based contractor Shannon Campbell, work with gourmet butchers' organisations and in-store promotions, alongside magazine features and advertisements in foodservice trade magazines, websites and point-of-sale material.



Kiwi chef Shannon Campbell hard at work at one of the P2P Benelux Northern Hemisphere summer events earlier this year.

The pilot programme underway in Germany saw Silver Fern Farms testing the non-seasonal waters for summer Cervena promotions in the market using successes learned from the Benelux programme. Wholesale tasting events were held involving the venison marketer, its importer and three German foodservice wholesalers.

The summer promotion resulted in a total of nearly 95 tonnes of Cervena sold in Benelux and Germany in 2017. The most popular cuts were all suitable for grilling and summer menus - four-cut leg, striploin, frenched rack and tenderloin.

"The good news is that all four companies expressed their intention to continue with the Cervena summer promotion in Benelux for 2018, with the encouragement of their importing and distributing partners," explains DINZ P2P Manager, Innes Moffat.

"It's early days, but the indications were relatively positive in Germany too and activity there will continue in 2018."

The importers recognise this will require a long commitment to create summer demand for Cervena in in Europe, he says. They also recognise that the presentation in individual company activities needs to be consistent, to enhance the impact of any promotions.

"The exporters have also noted a growing 'summer game' category. This creates the opportunity for New Zealand venison, but also creates opportunity for competing game items."

Venison exporters are expected to confirm their 2018 programmes by December, with at least part of the campaign, now in its fourth year, starting to target consumers.

Cervena appellation evolves

In 2017, Cervena licensees agreed that the appellation needed its first refresh in 24 years. The tagline "Natural, Tender Venison" has been replaced with "Pure Freedom". The Cervena diamond shape and stripes are still prominent on the packaging guidelines (gold for chilled, silver for frozen), but are now optional.

Duncan NZ marketing manager Glenn Tyrrell says the change is timely and follows a thorough review of how Cervena is marketed in Europe and the United States. In all markets, the primary outlets for Cervena for the marketing companies are foodservice and the primary target is chefs. The new positioning reflects this.

The Cervena evolution allows all five venison exporters to build a story that aligns with the European promotion programme, but which also works perfectly

for US customers, he says.

Moffat says the companies agreed to review the Cervena imagery, messages and packaging guidelines as part of a push to use Cervena in a wider array of markets. The refreshed look is being rolled out progressively as the marketing companies update their promotional materials and packaging.



New Cervena "Pure Freedom" branding will be used in Benelux and Germany in 2018.

High growth BV stags increasing venison profit at Waerenga

by Alison Spencer, Deer Industry News writer

Buying in younger stags with better breeding values (BVs) for growth rates is helping to increase weights, earlier and better for Waerenga Station's venison operation.

WAERENGA STATION IS a breeding/finishing operation owned by the Olivers near Te Kuiti with 9,500 stock units (SUs) of deer, sheep and cattle running over 730 hectares effective. The deer herd, ranging over 450 deer-fenced hectares on the property, comprises 716 MA hinds, 160 first fawners, 390 weaner hinds, 390 weaner stags and 50 MA stags. This year, the MA hinds had scanned 96 percent in calf, with a final weaning rate of 93 percent.

Other stock includes 1,600 ewe SU and 1,000 of hoggets to put to the ram; plus 150 steers and 400 bulls in a bull-finishing unit.

With annual rainfall guaranteed at around 1,600-1,800mm – closer to 2,000 mm this wet year – it's a "pretty summer-safe" property, says former Waerenga farm manager, Mike Ferrier. Earlier this year, he moved 5km "as the crow flies" (22km by road) to the Olivers' other farm, Three Rivers, where he now manages that finishing and velvetting operation.

Eight years ago, when Mike and his wife Christie first joined Waerenga, the farm was breeding and finishing terminal stock, buying in replacement hinds and mating to a terminal sire. However, with only very mixed quality replacement hinds available for purchase for mating with unrecorded terminal sires, the herd was struggling to get its maiden hinds in fawn and achieve target fawning percentages, he explains.

Over the past six or seven years, it's been a gradual switch over from the opportunistic "mixed everything" – but mainly wapiti x red – breeding herd, to a conventionally line-bred red breeding herd at Waerenga, concentrating on strong genetics for venison production.

Following a period away from Waerenga, Mike returned to manage Three Rivers in mid-2016 and joined the Waipa Advance Party (AP), that the Olivers had been part of since it was first set up in mid-2015. The AP is part of a network of 25 groups of like-minded farmers nationwide supported with funding from DINZ and the Ministry for Primary Industries' Primary Growth Partnership fund. The APs are part of the deer industry's Passion2Profit programme aimed at lifting industry profitability.

Now, along with 12 other farms, Mike and new Waerenga farm manager Edmund Ferreira are active and enthusiastic AP participants.

The farm team hoped for help from the group

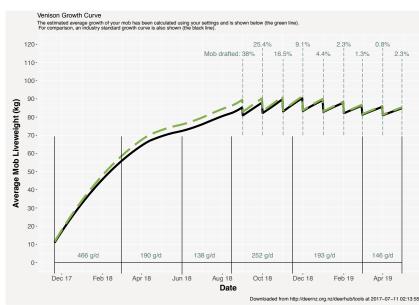
towards the farm's goals of maximising profitability, utilising land classes most appropriately and running a balanced, repeatable management system.

In 2012, the focus at Waerenga had already gone on to terminal weights and improvements to the breeding herd. After coming into the AP, they started paying attention to selecting stags based on estimated breeding values (EBVs), which provide an estimate of the real difference that can be expected between the progeny of a stag and the average.

A sire with an estimated Carcass Weight Breeding Value (CWeBV) of +15 could be expected to have offspring that would be 15kg heavier than average, when mated to a hind that also had +15.

"Without EBVs, you don't know what you're buying," Mike explains, adding the focus went on to the stags' 12 month liveweight breeding values (W12BV).

Referring to tables in the national deer recording database, Deer Select, he and the Olivers identified and started to buy better quality and heavier high-rated two-year-old W12BV stags from a handful of highly reputable deer studs. From 2012, these have been used for breeding replacement stock from the MA hinds. Unrecorded sires have not been used at Waerenga since then, when



The venison growth curve tool on the Deer Hub allows you to calculate the average growth of your mob compared with an industry average.

the remaining stags and hinds were moved to the Three Rivers property.

The results are already apparent at Waerenga.

"The yearling hind conception rate is up, which means we don't need so many R1 replacements, so we don't need to put so many to the stag and can divert some to the slaughter mob instead," says Mike.

Originally, the team was taking the stags out on 10 May but the date is moving earlier each year towards a target of 20 April, to reduce the chance of late fawns. This year, the stags were removed on 28/29 April.

Another thing they found, he says, was they weren't feeding the hinds as well as they could, especially during lactation. The hinds now get bought-in supplementary feed when required, mainly pasture-based baleage and some maize.

"Changing that is another reason we're getting a bigger weaner," he says.

The changes mean fawns are being born earlier and so average liveweights are heavier at target dates and the carcass quality is better.

Analysis of Waerenga's kill data sheets from its meat processor Silver Fern Farms shows the difference between 2014-2015 and 2016-17 (Table 1), when the additional 3kg carcass weight added \$27/head on a \$9 schedule.

At the start of weaning this year, farm manager Edmund randomly selected fawns for weighing on 2, 3 and 4 May, yielding

Table 1: Numbers and weights of Waerenga yearling stags processed.

Season	Number of yearling stags killed	Average carcass weight
2014-15	353	52.6
2016-17	345	55.6

an average of 68kg liveweight. The weaners were pasture-fed with 200g of maize introduced per animal from 11 May. More were weighed at the end of weaning on 30 and 31 May, revealing an average weight of 74kg.

Early calculations using the P2P Venison Growth Calculator. one of several tools now available for deer farmers at DINZ's online Deer Hub (www.deernz.org/deer-hub), suggested the team was on track to hit an average 55kg carcass weight with average kill date of mid-October, well in time for the chilled venison season.

"The actual end result will depend on the killing strategy," says Mike, adding the Olivers' plan is to kill a higher percentage earlier to take advantage of better prices early in the season.

"We also want to keep the average kill weight up as much as possible," adds Edmund. "The goal is to finish the kill in early December at carcass weights of 55kg/head."

At the time of writing in mid-October, the Waerenga team was well on track for that target and indications were that they may, in fact, achieve better. Forty-four percent of 2017–2018's 390 selected deer had already been sent for processing at an average carcass weight of 56.65 kg, an increase of four kg per head on 2015. While there were still 220 stags and 190 hinds left to go off to the works, looking at the average schedule price of \$10+, the extra 4.05 kg should add \$40.50 per head to the farm's income this year.

Buoyed by the earlier results, eight new stags were bought from Deer Improvement in October 2016 (Table 2) with W12BVs of between +28.59 and +32.27 and CWeBV of between +13.927 and +16.547 to be also used for breeding replacements.

Table 2: 12-month weight and Carcass Weight EBVs for Waerenga stag purchases, October 2016.

Stag	W12BV	CWeBV
1	28.59	13.927
2	29.87	14.667
3	29.51	15.157
4	29.22	15.507
5	29.15	15.627
6	31.50	15.727
7	31.36	15.747
8	32.27	16.547

These were mated with the main mob of hinds in autumn and, following close monitoring by Edmund, the results will be known at weaning next May.

He says the farm's aim is to get as many animals as big as possible, as quickly as possible. The plan is to increase MA hind numbers to around 1,000, which will see a lift in numbers this year and next, before plateauing in 2019/2020.

Having support from the other farmers in the AP has been invaluable for the Three Rivers team in the development of the

"They're a bloody good bunch of guys and girls. There's a range of ages from experienced to the young and new deer entrants like Edmund who started recently from a dairying background," Mike says.

"There really is no question that can't be answered."

At the time of writing, South African Edmund was nine months into the job and finding the support "fantastic". He's really enjoying the change to deer.

"The deer industry is really one on its own," says Edmund. "They will share information fully and frequently and are passionate about what they do and how they do it.

"Being in the AP has been amazing for me. The wealth of knowledge in the group is unbelievable and has been very helpful,"



Mike Ferrier (left) and Edmund Ferreira, with Three Rivers' three-year-old velvet stags in the background.

Southland Elk/Wapiti Regional Workshop

by Phil Stewart, Deer Industry News Editor

About 60 people gathered at Murray and Bev Hagen's Connemara Wapiti near Manapouri on 11 October for a P2P Regional Workshop. The day was also sponsored by BNZ and Duncan New Zealand and was coordinated by Andrew Roe, facilitator of the Southland Elk/Wapiti Advance Party.



Murray Hagen (right, with microphone) and Jim Cameron (centre, checked shirt), explain the advantages of using feed pads at Connemara.

THE HAGENS STARTED deer farming in the 1980s and moved to their current property 18 years ago, converting the run-down sheep and beef operation to deer. After this they took up the opportunity to buy an existing Wapiti stud in 2005. They sold bulls by private treaty until 2011, when Jim and Jacinta Cameron came to work for the Hagens and advance the stud. The stud's first one-day sale seven years ago was "quite successful" and they have been building on that ever since.

Murray said he has always been interested in innovation and puts his money where his mouth is, joining Deer Select and then the Elk/Wapiti Advance Party. One of Connemara's bulls tops the Deer Select Elk/Wapiti tables on 12-month weights and Terminal index. Three years ago the Hagens and Jim Cameron won the Gallagher Technology and Innovation Award as part of the Deer Farmers' Environmental Awards. The judges at the time commended Connemara as an "extremely tidy operation ... managed by a passionate team who are willing to adopt new technologies and give things a go".

On the farm tour during the workshop Murray and Jim spoke at length about their wintering systems and use of feed pads. These are carefully managed to control any leachate and keep it well clear of the nearby Waiau River. In fact they have moved away from short-chop silage in favour of baleage – both grass and lucerne – which also manages the environmental risk.

Murray explained that the second and third calvers had been struggling on silage during winter, but are doing much better on baleage. He said there is less waste with baleage than there had been with silage, and the per-hind wintering costs on baleage were nearly \$8 less. He said they make their own baleage and have more flexibility about timing. Making pasture silage had also required a lot of land to be closed up.

The baleage is tested, with the best-quality being given to the stock classes that will benefit the most. Feed analysis figures shared by Murray bore out the contrast between silage and baleage: Crude protein for the silage was 9.9% compared with 12.0% for pasture baleage. ME for the silage was just 8.8 compared with 10.3 for the baleage – even some baleage made from seven-year-old pasture still had an ME of over 10.

Jim said the cows feed quietly on the baleage over winter, with only a handful going to grab a bite at any one time. "They'll take a mouthful and then wander off to finish it while the rest of the mob sun themselves. There's not any stress or competition."

They take three cuts a year off the lucerne for baleage and also graze it down hard with 2-year-old bulls. They are completely sold on lucerne which, for them, works better than supplements such as nuts. It's especially good for quickly getting condition on in autumn and spring.

As well as the baleage, swedes, kale and rape are grown. Strategic use of deer nuts, at a cost of \$38 per head, generates a 50–100% return on investment.



Lucerne is well liked. This stand is now in its 12th season.

Table 1: Connemara Wapiti farm data.

Effective area	300ha (280ha deer fenced)
Stock units wintered	5,073 (18SU/ha)
Mixed age (MA) cows	720
R2 cows	100
Cows culled/sold	70
R2 velvet bulls	80
R3 velvet bulls	70
MA velvet bulls	200
Breeding bulls	22
Bulls sold as sires	40+
Bulls culled	40
Weaners reared (incl. about 300 bought in)	1,000
R1 deer slaughtered	800
Average weaner weight (stud)	77kg
Average weaner weight (commercial)	74kg
Average carcass weight (ave. age 340 days)	66kg (M), 63kg (F)
Average MA cow liveweight	170kg

The pasture mix includes Sextet, a multi-stage ryegrass, with red and white clover.

Connemara is a mixed venison and velvet operation, also selling sires each year (see Table 1). Murray is a strong supporter of Deer Select (his 300 stud cows are on the programme) and makes good use of the estimated breeding values to help highlight the most meritorious sires. He focuses especially on 12 month weight, eye muscle area and the Terminal index.

Reproductive performance is strong. First calvers this year scanned 80%, but the rest of the cows ranged from 92% (second calvers and mixed age stud AI), up to 97% (mixed age naturally mated stud herd). First calvers are joined with top BV spikers by 15 February with the rest of the sires going out with the other cows on 1 March. All sires come out on 25 April.

Genetic selection has seen velvet weights steadily ticking upwards, with average 2-year-old weights lifting by 1.25kg over the past five years. Total harvest for 2016/17 was 2.2 tonnes.



Jim Cameron demonstrates feeding out baleage directly into a feed rack.

About 1,000 weaners a year are raised, including 300 boughtin. The weaners are put onto crops in June, with lucerne baleage used to help boost growth during autumn and early spring. The first drafts at 130kg liveweight are away by 1 October and the last by 10 January. About 100 stag weaners are taken through to 135kg with about 300g of spiker velvet taken off.

High growth sires = more profit

Deer Select Manager Sharon McIntyre spoke to workshop visitors about choosing terminal sires and what criteria were important. She said that while buyers had a good eye for visible attributes such as size, muscling and temperament, some of the attributes that make you money aren't apparent when looking at a two- or three-year-old terminal sire.



Connemara wapiti Deer Select cows finishing on rape



continued on page 18

Elk-Wap workshop: continued



Connemara commercial cows.

"It's what their progeny will be doing when you are killing them at 10–12 months that counts – not what they look like as a three-year-old. The breeding values will tell you what those sires were like at that younger age."

She said most buyers wanted good traits for growth rate, carcass yield, eye muscle area and so on. While companies weren't rewarding farmers directly for those as yet, there was scope for being prepared to take advantage. "Breeding is a slow game, so we want to be ahead of the game when [financial reward for these traits] comes."

Looking at Deer Select breeding values (BVs), Sharon said the W12 Deer Select BV covered liveweight and carcass weight. If you were also after good yield, the eye muscle area (EMA) or lean yield (LEANY) BVs came into play. "But if you are interested in both growth rates and yields, we've turned these into a Terminal index that gives the value in terms of dollars per hind mated," she explained.

But do these numbers really translate into dollars and cents? They certainly do, and Sharon showed how this works with the "real world" performance of four wapiti sires that all looked

similar but had varying BVs for weight at 10 months (see Figure 1). The sires were part of the Deer Progeny Test programme and all birth and slaughter dates were the same.

4 Wapiti Sires - look similar

Sires	Prediction	Actual W10	\$/Head
1	+9.7kg	123kg	\$632
2	+4.2kg	118kg	\$605
3	+11.4kg	124kg	\$639
4	+16kg =	128kg	\$659

Figure 1: Differences predicted by BVs and actual performance in kg and dollar terms for four sires.

The BVs for the four sires predicted a difference of 11.8kg between the best and worst of them. The actual difference was 10kg, not far off. And the difference in dollar terms was an impressive \$54 a head. "They were killed in mid-October, so there was the potential to take these progeny through to heavier weights. When you consider that \$54 advantage was per animal, that adds up to quite a bit when you multiply it by 30 or 40 progeny."

Sharon said breeders often put quite a few measurements into sale catalogues, such as liveweights, EMA and so on, but she warned that this information wasn't corrected for birth date. EMA was not much use as raw data. "A big animal will have a bigger EMA than a small animal. But what's important is whether that EMA is above or below average for an animal of that size. That's what a BV can do and it shows how BVs add accuracy to what you are looking at."

Elk & Wapiti Society velvet and hard antler competition

A VIDEO SALE of elite bulls and cows is a new addition to the Elk & Wapiti Society's annual velvet and hard antler competition on 27 January 2018.

The initiative is a way of showcasing, in a central location, society members' top elk and wapiti genetics, says EWS president

"We hope it will attract some attention. We've already had significant interest and see it as something new and different."

In another change, the competition is being held in south Canterbury at the Morgan family's Raincliff station rather than at Wanaka. The event will include a farm tour, a BBQ lunch generously provided by Mountain River Venison, and clay target shooting. The PGG Wrightson video sale planned for midafternoon will precede the velvet viewing. The prize-giving, a spit-roast BBQ dinner and auction will be held at the nearby scout camp where accommodation is available.

"After last year's formal 30th anniversary celebrations, we've decided to keep this year's competition more informal and think the new location will be ideal," Paul says.

For more information about the event and the video sale contact Paul Waller: 027 292 4424; pwallerelk@gmail.com



Elk & Wapiti Society President, Paul Waller: Significant interest in new format event.



Connemara sire bulls.

Like red deer, wapiti had moved a long way since 1995 in terms of growth rates, albeit the scale used for the two breeds was different and numbers couldn't be meaningfully compared between red and wapiti sires.

Venison EMA was also an indicator for high eating quality. Sharon said some herds had up to eight years of EMA data and increases in this BV were starting to be seen. "We don't just want big, framey animals going to the works, we want animals with good muscling."

She commended the elk/wapiti fraternity for their cooperation sharing genetics and enabling benchmarking of BVs amongst themselves. She said those selling terminal sires had been working out how to make it easier for buyers to make sense of the BVs of their animals, stripping the information in tables down to key values of 12-month weight (W12), EMA and the Terminal



index expressed in dollars. Murray Hagen and Jim Cameron had implemented a colour coding system devised by Dave Lawrence, to help easily highlight where particular sires sat amongst their peers (e.g., top 10 percent, top 25 percent, etc.).

Generation turnover and the rise of the "next generation" wasn't just an issue for the human part of the deer industry, Sharon said. "You can keep a wapiti sire going for 8 years if you want to, but in the meantime the breeder will have made big genetic gains, so consider replacing your sires more often to take advantage of this."

And while genetics is important, Sharon urged those buying sires to think about the size of their hinds and the environment they would be farmed in.

"Buy animals that are the right size for your hinds and your property - be that high growth rate reds, wapiti or elk. Hinds feeding higher-growth fawns will need more feeding. Their body condition score needs to be at least 3 for mating so they don't slip back with later-born fawns the following season if they've been underfed."

Mate Allocation Calculator

Sharon McIntyre demonstrated the new Mate Allocation Calculator, now available on the DINZ website at http://deernz. co.nz/deer-hub/tools/mate-allocation-calculator

This handy tool helps you work out how many of your hinds you need to put to a maternal sire each year to breed replacement females and how many "spare" hinds can be put to a terminal sire.

The tool is easy to adapt to your own farm situation and lets you manipulate factors such as the percentage of the total breeding herd to be replaced each year, how many replacements if any that you buy in, whether or not replacements are bred from first calvers (perhaps not so advisable in hard hill country), average hind losses, maximum age of breeding hinds and so on (see screen shot below).

The model used also lets you factor in calf survival rates and conception rates for first and second fawners and mixed age hinds, as well as culling policy for dry females in each age class.

The calculator provides an output graph showing how many of each class need to go to either a terminal or maternal sire to give you the number of replacements you want. Sharon urged farmers to visit the website and have a play with the calculator. "It's still a prototype, so we welcome any suggestions."



Screen shot of Mate Allocation Calculator at work.

Elk-Wap workshop: continued

Advance Party projects

Second calver pregnancy rates

John Hamilton, who runs an integrated sheep and deer operation at Winton, described work done to get better pregnancy rates in second calvers. They have a breeding herd of 310 mixed age hybrid hinds and 60 first calvers.

First, second and third calvers are mated separately in single sire mobs, with sires removed in the first week of May. They scan the mixed age hinds twice.

In the past couple of years they have worked hard to get condition back onto the hinds in time for mating and this has been rewarded. They've achieved good conception rates with relatively few lates compared with the national average and their own performance in earlier years.

Part of the strategy with the second calvers, which need to recover quickly after raising their first calf, has been to start supplementing with barley in January and drench them in February. This year the second calvers matched the mixed age hinds, both groups conceiving more than 90 percent early, with only about 2 percent dry.

A cost benefit analysis on the barley fed to the second calvers showed that every \$1 spent returned about \$3.40 in additional and earlier-born calves. Specific management measures to support the improved performance included:

- · culling hinds that had lost a pregnancy
- set stocking early-calving hinds and rotating from the second week of December to improve access to better feed
- · optimising pasture quality for lactating hinds
- · better utilising late spring pasture.

Poor baleage affects pedicle development

Dave Lawrence described an experience in his own herd that graphically illustrated why good genetics is only part of the equation – you need to give the right quality tucker to reap the benefits.

He houses weaner males indoors over winter and the poor performance of the 2014-born cohort as velvet producers piqued his curiosity. Why had these animals done so poorly when those born a year earlier and a year later had done much better?

What it came down to, Lawrence discovered, was the impact of a particularly bad batch of baleage. The crude protein level, he later found, was 9.4 percent, about half the norm for baleage used in winter, and well short of what was needed to initiate pedicle development. The metabolisable energy of the baleage was only 8.3 megajoules/kg dry matter, below the 9–12 ME range considered necessary for growth over winter.

As a result of the poor feed, this otherwise genetically well-endowed mob grew at only 70g/day over winter compared with the norm of at least 200g/day. In addition, their spiker velvet was, on average, 230g lighter than that of their 2013 and 2015-born herd mates. This poor start flowed through to the following year, when the 2-year-old velvet weight for this group was 1.4kg less than the average for this age on the farm.

Dave said the offending baleage "looked and smelled okay", but clearly fell short of what it should be. "We now test baleage before

we buy it," he said. Weighing regularly through winter could also help pinpoint feeding or health issues early, he added.

Reducing calf losses

Geoff and Sam Pullar run wapiti at Littlebourne Farm, Winton. Geoff said they were losing a lot of later-born calves to cryptosporidium. A major risk factor was the young animals drinking from stagnant puddles, a breeding ground for the parasite. Earlier-born animals were not so exposed to these conditions, which develop in summer.

Geoff described several management changes that have helped them get on top of the problem:

- · reduced stocking density for calving mobs
- earlier scanning to allow fetal ageing so late calvers can be managed in their own mob
- no longer taking a cut of baleage off part of each calving paddock (less stress, more cover, better feed)
- improved and completed water scheme so calves are less likely to drink from puddles.
- Geoff said they now lose only two or three calves each season much better than the 20-30 they had been losing in the worst years.

Farmers helping farmers

Dave and Jackie Stodart have two farms, a finishing, velvetting and sheep block at Te Anau and a cattle and deer breeding property at Dunrobin. Andrew Roe presented on their behalf.

He said the Stodarts wanted to improve reproductive performance, growth rates in young stock and velvet production. They had picked up a range of ideas from others in the Advance Party, showing yet again what a great vehicle for practice change these groups are. Changes included:

- mating a greater proportion of their hinds to terminal sires while cutting down overall hind numbers to allow for the extra feed required
- · bringing weaning forward by 10 days
- · weighing young stock more frequently
- break feeding weaners on winter crop rather than block grazing
- reducing target slaughter weights from 100kg to 95kg to ensure all yearlings were killed by the end of March
- increasing the cut-off weight for retention of 2-year-old velvetting stags from 2.5 to 2.8kg.

Andrew said the Stodarts had improved scanning percentages for first calvers from 83 to 88 percent over the past two years. Weaner growth rates had also improved. While carcass weights had dropped by 1.5kg to 53.5kg this year, that was more than offset by having got 37 percent killed by Christmas (21 percent last year), and all killed by the end of March (10 percent left last season). At the same time, less feed was required for the deer, making more available for other stock classes.

Two other farm reports from this workshop have been covered in previous issues of *Deer Industry News*:

- Economic benefits of delaying kill date: Deer Industry News, August/September 2016, page 16
- Benefits of leptospirosis vaccination: Deer Industry News, June/ July 2017, page 16.

Get fit-for-purpose genetics

Get genetics to do the job you want them to do. That's the advice of North Canterbury Advance Party member, Lyndon Matthews.

"YOU NEED TO define your deer farming goal and choose the appropriate genetics taking into account your own situation," he says.

For the Matthews family of Puketira Deer, the big focus over the past decade has been to breed prime weight weaners that are out the gate by the end of November.

"We're now killing all our stags and non-replacement hinds – all reds and including first fawners – by 1 December. We're in a summer-dry environment so we have to get them up to weight and away as soon as possible."

For Lyndon, using Deer Improvement and AI to advance the genetic base of the red herd was a no brainer.

"I had seen what LIC had done for the dairy industry so when Deer Improvement came along I saw it as a great opportunity to get some of the best genetics."

However, buying stags might work better in other farming situations, Lyndon says.

"I'm not saying everyone should do AI. You need to select the sires that will do the job taking into account any environmental

and management constraints."

The driver for a change in genetic direction from a hybrid system ten years ago was two-fold.

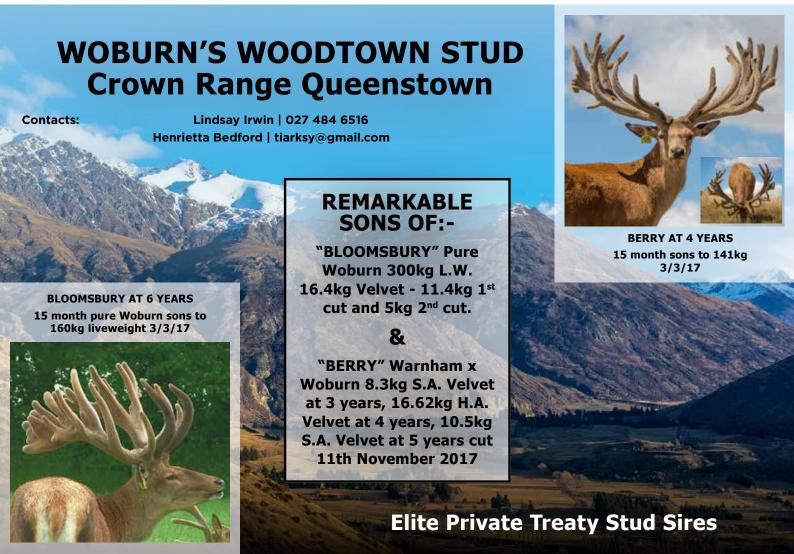
"We were putting wapiti bulls over hinds to get hybrid weaners. We got the weaners to good weights in early spring but in a tough summer it was dragging down the condition of the hinds."

On top of that was "stag failure" which one year left 20 percent of hinds dry. Also etched in Lyndon's memory – and an indication of what good genetics could do – was a red stag bought during their first years of deer farming that added another 7kg liveweight onto weaners.

The Matthews now use top-ranking sires based on the Deer Select R-Early Kill index in an annual AI programme across 75 second and third calvers, aimed at producing a medium type animal. The best stag progeny are used over the other 400 hinds and some are sold as sires to a repeat buyer who prefers medium type well-muscled animals.

Lyndon says it took about five years of AI for a noticeable improvement in overall herd performance, and two-to-three

continued on page 22



Puketira genetics: continued

generations for significant advancement.

"We don't have the tail end we used to, and we have a consistent and condensed weight range."

He says that the gains in any breeding plan need to be backed up with appropriate changes in feeding and management, something he was initially slow to realise.

"It was suggested to me after six years of the AI programme that we weren't feeding well enough to capitalise on the genetic gain."

The stocking rate was reduced, largely because of drought, and the move paid off.

"Despite the last two dry years, we've turned out better-thanaverage weights. I'll probably have to drop the stocking rate further or feed the weaners even better to see their true potential."

Another management move three years ago was culling a lot of older hinds to make way for more yearling hinds.

"We turned over half the hinds in two years to get new genetics more quickly into the herd."

The upward trend in net sales and venison returns over the past three seasons is proof that focused genetic improvement has paid off, but there have been less measurable paybacks.

"One of the big benefits of AI is that we get excellent replacements for our herd. In a hybrid herd situation it's often difficult to source such good genetics. Often farmers don't know from one season to the next where they'll be getting their replacements and there's also the risk of buying in a health issue."

Genetic improvement along with EID tagging has turned the traditional kill strategy on its head by identifying the heaviest and fastest-growing animals and keeping them longer to make a better profit margin.

"If they're growing 500 grams a day it makes sense to keep them a month longer, by which time they'll put on another 7kg carcass weight, instead of keeping lighter ones that are only adding 100g/day. Changing our killing strategy has improved the per-head value."

Genetic improvement is a long-term project and always a work in progress, Lyndon says.

"There's still room to improve average kill weights and dates, but they're moving in the right direction."

Getting on track and staying on task is the challenge.

"When you have a clear focus on what you're trying to achieve, you will start moving forward."



From left, Thomas, Lyndon, Millie, Eldon and Delaney Matthews. Photo: Tony Benny.

R-Early Kill index

The Deer Select R-Early Kill index is made up of several breeding values including growth, meat and conception date. Selecting animals off this index ensures that animals born are not only good for venison but the female progeny are suitable hind replacements.

The R-Early Kill index animals Lyndon uses are bred by Deer

Improvement. Fawns born in 2016 are from a stag currently ranked third, with an R-Early Kill index estimated breeding value (EBV) of \$25.40. This same stag is currently ranked first on the Terminal Sire index with an EBV of \$56.58.

Table 1: Puketira deer: Venison returns 2013-2016

Year	Yearling stags			Yearling hinds				
	Carcass weight (kg)	Net \$/head	\$/kg	Average kill date	Carcass weight (kg)	Net \$/head	\$/kg	Average kill date
13/14	52.5	\$342	\$6.51	October	54.4	\$383	\$7.04	March
14/15	56.4	\$415	\$7.36	November	51.7	\$345	\$6.67	March
15/16*	55.8	\$466	\$8.35	Late Oct.	47.4	\$352	\$7.43	Early Nov.
16/17*	57.5	\$495	\$8.61	Mid Oct.	51.2	\$412	\$8.05	Mid Nov.
*Drought								

Correction: Rising Stars Fallow Hard Antler Category

The Fallow category in the 2018 Rising Stars competition is for 3-year-old Fallow Hard Antler, not 2-year-old as advertised in the October/November Deer Industry News.

Rising Stars entry forms

Entry forms for the 2018 National Rising Stars Hard Antler and Velvet Competition are available online at http://deernz. org/201718-velvet-competitions (they will not be posted out with the December Deer Industry News as advised earlier).

Enhancement work at Puketira wins another award

By Phil Stewart, Deer Industry News Editor

North Canterbury's Matthews family have this year won their third Deer Farmers' Environmental Award, the Duncan New Zealand Award for vision and innovation while mastering a demanding environment. They won the same award in 2008, and in 2012 were recognised with the Firstlight award for total commitment to farming sustainably with a customer focus.

THE AWARDS HAVE been well earned. (They have also featured in the Ballance awards, in 2007, and this year, when they received The Beef + Lamb New Zealand Livestock Award and Environment Canterbury Water Quality Award.)

While the Waikari District is well known for being summer dry the risk of topsoil loss and enhancing water quality are equally challenging. Lyndon "hates soil erosion with a passion".

Two hundred of the 267 hectares of rolling, limestone country is deer fenced but the Matthews are planning to transition from sheep and deer to exclusively deer. It's a decision they reached following the 2017 Deer Industry Conference and is a strong vote of confidence in the future of the deer industry by the family.

Lyndon says the current breeding herd of 450 hinds will be built to about 750 over three years as the sheep are phased out and the balance of the property is deer fenced.

The couple both work off farm, Lyndon in rural credit risk with ASB and Millie as South Island account manager for a bathroom company. They have a manager on the property on weekdays, and in the weekends other family members pitch in as required. Eldest son Eldon has recently finished at Lincoln and is Environmental Manager for Patoa Farms. Daughter Delaney has completed her second year studying Agribusiness and Food Marketing at Lincoln while youngest son Thomas has started a diesel mechanic apprenticeship (see photograph opposite on page 22).

Lucerne has been the key to providing good quality feed through lactation and into late summer. While cattle could be useful for controlling pasture and maintaining quality, Puketira doesn't carry any. Lyndon said the combination of lucerne and using fairly large mobs to keep pasture well chewed down when necessary keep good feed in front of the herd.

On the environmental front, Lyndon says a couple of areas had shown pacing damage. Outriggers with hot wires at about waist height, and avoiding having two mobs sharing a common fence have been two simple measures to minimise pacing and they will apply what they've learned in the areas remaining to be deer fenced.

Providing shelter, screening between paddocks and paying attention to good nutrition also help reduce fence pacing, Lyndon has found. "On a cold, wet night they'll pace if in an exposed place," he says.

Willows have been removed along a river bed, which has been fenced and transformed into a wetland with flaxes and cabbage trees. Higher up, efforts are being made to preserve tussock cover on limestone outcrops.

A Farm Environment Plan (FEP) for Puketira was put together



Wetland plantings at Puketira are establishing well. Photo: Tony Benny.

by Eldon three years ago, after they attended a Beef+Lamb NZ FEP workshop for deer farmers, facilitated by James Hoban.

Lyndon says putting an FEP together is just a part of the journey. "You need to understand how you are going to implement it and more importantly, why. He says the regular input from Janet Gregory of NZ Landcare Trust and also James Hoban who facilitates their North Canterbury Advance Party, has been invaluable.

Decisions are not always straightforward. Lyndon says his Advance Party colleagues were sceptical about the siting of a selffeed silage pit, but Gregory had reassured them the choice was okay, showing the value of outside expertise. The use of the pit rather than feeding out is expected to reduce compaction damage during winter.

Another important relationship is with Environment Canterbury. While things can get fractious between farmers and regional councils at times, Lyndon says he can't speak highly enough of the ECan staff they deal with.

"The staff we deal with are pragmatic and helpful. Our son Eldon is on first name terms with the local people. We've been seeking their advice on the design of a sediment trap just to make sure we get it right."

The Matthews' winning of the Duncan New Zealand Environment Award has encouraged other farmers to step up and seek advice from their local regional council staff on issues like removal of willows - a positive development.

Digital marketing specialist joins DINZ

A Mandarin-speaking Cantabrian young leader is the new venison marketing executive for DINZ. He stepped into his predecessor Marianne Wilson's shoes in early November.

BORN AND RAISED in Christchurch, Nick Taylor graduated from Canterbury University in 2005, with a BA (Hons) in marketing and Chinese, a language he had also studied while at Burnside High School.

Taylor's first primary sector role was as market analyst for the Wool Industry Network. This was an initiative established by Meat and Wool NZ in 2006 to develop a strategy to improve the economic return of wool to New Zealand.

"I really enjoyed this role in terms of both the analysis component and the strategy development. It was clear New Zealand wool, much like New Zealand farm-raised venison, had the potential to hold a premium position in the market," he comments.

His first exposure to the deer sector was through visits to his aunt and uncle's farm. They run breeding hinds alongside grazing dairy cattle, having converted from sheep and beef a few years ago.

Several marketing roles, including with two membership organisations – the Medical Assurance Society and Physiotherapy New Zealand – since his move to Wellington in 2009 further developed his digital marketing skill-set. He will use that expertise, including his knowledge of social media and other digital tools he has used to improve members' experiences, to redevelop the Cervena® website for the US and European markets, as well to build social media strategies for New Zealand and overseas markets.

Taylor has continued to develop his formal qualifications over the years, completing his Masters in Marketing, with a focus on digital marketing, and the two-year New Zealand Leadership Institute's Future Leaders programme.

A keen interest in Asia, with a focus on China, led him to become a member of the Asia New Zealand Young Leaders' network. He has also participated in a language exchange programme with Yunnan University in Kunming and the Japanese Government's Ship for World Youth Group.

When he has spare time, Taylor enjoys cooking.

"And, I'm looking forward to working alongside Graham Brown and picking up some tips I can use at home!"



Digital marketer and keen cook, Nick Taylor, is getting stuck in to his new DINZ role.

Planning workshops

Farmers are being encouraged to get ahead of the game and prepare now for whatever final new environmental rules are rolled out in the Waikato and Waipa river catchments.

THE PROPOSED PLAN Change 1 for the catchments recognises that environmental solutions need to be tailored to individual farm settings, and Farm Environment Plans (FEPs) are an effective tool for doing that. That's why the requirement for all farms to have a tailored FEP is central to the plan.

Waikato Regional Council sustainable agriculture advisor Don Harford suggests farmers start building farm planning skills now so that they can do as much as possible themselves to keep costs down and develop the best possible FEP for their farm.

"Many farmers are already doing good things environmentally on farm. But they don't always get recognition for this and the challenges they face, and many will be missing opportunities for efficiencies, improvements or new ideas. That's especially true in difficult times like the past very challenging winter when it's been hard just to keep their head above the water and mud."

To help with getting ahead of the game, Don put together a

workshop for drystock farmers in the Lake Whangape catchment last month (the first of four) designed to get farmers together to talk about environmental risks and suitable mitigations relevant to their farming system.

He recognises that the knowledge base among farmers is extensive and the workshops will draw on both this experience and council suggestions.

These workshops will prepare farmers to attend Beef+Lamb New Zealand FEP workshops. These B+L NZ workshops take farmers to the next level in the planning process where FEPs are developed.

Don will also be offering these workshops in other catchments in 2018. He can be contacted on **0800 800 401** or by email **don.harford@waikatoregion.govt.nz**

Article supplied

Janet Gregory's work recognised

NZ LANDCARE TRUST'S Janet Gregory, who is well known throughout the deer industry for her work on environmental projects, has received the inaugural Kaitiaki Tohu Pai award, at the Southland Community Environment Awards. The award honours Gregory's work in biodiversity.

Her contribution has included coordinating the Southland Biodiversity forum, working with farmers and landowners on catchment scale projects, as well as her work with the deer industry. She has also played a key role with the Southland Rural Support trust, helping both humans and animals after adverse events.

Gregory first got involved with the deer industry in 2006, judging the Deer Farm Environment Awards, and has been regularly involved with the awards since then.

She has promoted environmental best practice across New Zealand with deer farmers preparing Land Environment Plans and running workshops. She is a regular attendee at field days and conferences promoting good practice. A major initiative for the deer industry was a three-year Sustainable Farming Fund programme to help increase uptake of environmental best practice as laid out in the 2012 Deer Farmers' Landcare Manual. The outputs for this included a series of 15 short videos capturing examples of excellent sustainable land and water management from around the country.

After 14 years living in Southland, Gregory shifted to Canterbury in May where she is now Canterbury regional coordinator and South Island team leader for the NZ Landcare Trust.

To view the best practice videos: http://bit.ly/2hbLN1T



Janet Gregory speaking at the recent Raincliff Station Focus Farm day.

10 January 2018, 11.30am

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Contact: Don Greig 027-694-2400 Roth.Greig@farmside.co.nz

Environment focus at Raincliff Station

by Phil Stewart, Deer Industry News Editor

The environmental work at Raincliff Station was a useful backdrop to a wider discussion on environment policy at a "Feed to Profit" focus farm day at the property on 26 October. The day was organised through NZDFA (South Canterbury/North Otago), DINZ, AgResearch and DEEResearch. Sponsorship was provided by Rabobank and Mountain River Venison.



Well-fenced gully at Raincliff with a good filtering margin.

BEFORE A FARM tour to view the progress the Morgans have been making on the property, DINZ Environment Policy Manager **Lindsay Fung** backgrounded the challenges being faced by the deer industry as regional councils start to roll out their freshwater management plans. Several of these faced legal challenges, one of which had been upheld.

He said proposed stock exclusion rules were a blunt instrument that could disproportionately affect deer. In general, Farm Environment Plans (FEPs, also known as Land and Environment Plans or LEPs) were a more flexible tool that would help mitigate the cost impacts of exclusion rules, but still manage stock impacts on water bodies. Looking at Canterbury, Lindsay said that farmers were understandably concerned about the consenting process, noting that requirements were quite complex because of the different thresholds being applied for different catchment zones.

He said the original 2004 Deer Farmers' Landcare Manual was ahead of its time, but other sectors have since caught up. "We haven't kicked on since then – we need to start front-footing the issues again."

One initiative that gets the deer industry back in the vanguard of change is the Environmental Code of Practice, currently in the final stages of development. This translates the original Landcare Manual into clearly defined good management practices and will provide the level of detail needed for farms to develop their own Farm Environment Plans.

Other initiatives on the environmental front included the addition of an Environment strand to the Passion2Profit programme, the setting up of environment-focused Advance Parties (with Invermay included in one), close links to the NZ Landcare Trust's work on farmer-driven catchment groups and a DEEResearch-funded study of the effects of deer farming on water quality in high country.

Lindsay said the formation of the Waikato "Farmers for Positive Change" group was a grass-roots response to the growing top-down political pressure on agriculture over water quality. More of these farmer-led community-based catchment groups are needed.

Mike Salvesen, who is President of Mid-Canterbury Federated Farmers, said the whole industry needed to work together on water quality issues, avoiding fights between sectors. He said the legal bar to appealing regional plans was set high. "They can only be appealed in the High Court and only if the plan is deemed to be wrong in law."

He is part of a wider regional policy group that discusses water issues and says Environment Canterbury engages with this group. Mike endorsed Lindsay's comments about the value of FEPs, noting they involved a lot more than just fencing off waterways and sensitive areas. "They detail measures such as fertiliser management, soil analysis, choice of paddocks, crops and so on. Because they are auditable and updatable, they assure the regional council about what we are doing."

He said farms that were part of an irrigation scheme in Canterbury were already consented, but those not in a scheme



David Morgan intends to fence off this muddy hollow and plant with willows, and ensure any outflow has plenty of filtering grass to pass through to pick up any remaining sediment. It is well away from waterways and any flow passes across two paddocks.

were expected to be consented if they farmed more than 50 hectares (or more than 20 hectares if feeding on winter crops). Just to complicate matters, these thresholds were being varied between catchment zones.

NZ Landcare Trust's Janet Gregory said workshops on completing an FEP could be arranged through Beef+Lamb NZ if a group of 10 or more was interested. She noted that FarmIQ also uses the Beef+Lamb FEP in its model.

Raincliff Station was looking green and lush on the day, partly a reflection of the excellent spring in the region but also the intensive pasture renewal programme to drive production - 444 out of the 650 effective hectares have been regrassed over the past two years.

With such an intensive programme of redevelopment come environmental risks and it was suggested that runoff could be mitigated by ensuring that any overflow from critical source areas could flow over a filtering grassy area before reaching a waterway.

There were indeed signs of the heavy rains over the previous weeks and months and runnels in some recently cultivated paddocks were evident. Lower areas had been flooded during



The strip in the middle of this slope has been left to provide stability and some protection from runoff.



New plantings like this (above) need protection from pests like that (below)



winter, with the loss of 4km of fencing, crops, several hundred tanalised posts and some farm machinery.

David Morgan said he had been "chipping away" on environmental improvements as budget and priorities allow, but in fact they have been doing plenty.

Gully floors have been fenced off and Carex secta (Pūkio, previously "niggerhead") is providing excellent filtration services in these areas. A fairly steep, gorsy area has been cleared, but a wide strip following the contour of the slope has been left

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Raincliff: continued

undeveloped to help prevent slipping and runoff (although remaining gorse plants get a "tickle up"). David said the decision to leave this strip was an example of the thinking that should be documented in a Farm Environment Plan, along with any other stories that support efforts to mitigate losses of sediment and phosphorus – the main risk with deer.

The Morgans have also spent considerable effort tidying and protecting the banks of the main river flowing through the property with double fencing, as well as fencing off and protecting some of the distinctive limestone bluffs. They intend to plant kanuka, manuka and cabbage trees along the base of the bluffs, which are visible from the road and a "shop window" for the property. David is keen to get the local school involved in environmental projects on the property as part of their engagement with the community.

Small guts and hollows are left alone in paddocks that are cultivated or sprayed – David added that was also partly down to tractor safety.

Another consideration for Raincliff and the whole South Canterbury region is providing a suitable environment for native bats, which prefer to roost in large, older trees and like the margins of waterways or wetlands where small insects like midges abound. South Canterbury is one of the few strongholds left for the bats.

A question of (breeding) values... Will Julie follow her "hart" or her head? Can Tim talk her around? Is Bruce able to deliver the goods? All is revealed in an economical 3 minutes in our latest Passion2Profit video! Visit our P2P YouTube channel for all the answers: http://bit.ly/2izfxGB [Spoiler alert: Quite a happy ending ensues]

Environment tips

- A series of smaller sediment traps is better than one big one.
 The top trap will catch most of the sediment while lower ones provide further filtering. Consider the slope and degree of filtering needed when planning sediment traps.
- If you are planting trees along a fenced off waterway running east—west, put them on the northern side so they shade the stream.
- When choosing plants, consult a local nursery about what will grow best in your district.
- Make sure some cover is established first before doing conservation planting. Keep the mix of species simple so you don't have to worry about different sprays for different plants. Hares, especially, can decimate new plants so provide some protection until they get established.
- To protect biodiversity on your farm it may be possible to
 access some regional council funding, especially if you find a
 threatened species (e.g. a native freshwater fish) within your
 boundaries. It can be more effective to access funding as part
 of a wider catchment group. Funding may also be available via
 DoC, zone committees or the Predator Free Strategy.
- A biodiversity "smart map" will show what native species are likely to be found in your area and could help guide your environment planning.
- Offal holes and silage pits need to be a minimum distance from waterways and set up so that no outflow can get to the waterway.
- Keep good buffers of vegetation along the margins of your laneways to provide filtering.
- Ensure your fertiliser machinery is calibrated properly and that you can record accurately where it has been applied.
 Acknowledgement: Janet Gregory, NZ Landcare Trust.

Deer experience wanted

Dear Mr Stewart

My girlfriend Alix (25) and I, Wannes (29), are coming to New Zealand in February and March 2018. We are both veterinarians.

I have been working with ruminants including deer (fallow, red and sika) for four years and would like to start a deer farm myself. In Europe (France, Netherlands and Belgium) I have been visiting and working at some farms already but the most knowledge comes from New Zealand. That is why, when we visit New Zealand, we would like to learn more about deer farming.

Would it be possible to help me learn the way they farm in New Zealand or get me in touch with some farmers so I can get some hands-on experience? We would be available for this from 12 March until the end of the month. We will be in the North Island but would be happy to travel south if that is where the opportunities are.

Thank you very much!

Wannes Boons

 If you can offer Wannes and Alix some deer farming experience while they are here in March, please email Wannes at:
 WannesBoons@hotmail.com



TUESDAY 15th - THURSDAY 17th MAY 2018

CAROLINE BAY HALL, TIMARU

It's time to start making your plans for the 2018 Deer Industry Conference.

THE CONFERENCE, WHICH will also combine with some sessions and social events with members of the New Zealand Veterinary Association Deer Branch, starts on Tuesday 15th. The first day will include the DFA's AGM and a series of short, farmand research-based technical sessions. The main conference follows on Wednesday 16 May, concluding with the Awards dinner.

The conference theme will relate to furthering the business of deer farming and feature high-quality keynote speakers, with international, national and regional relevance. Included will be a focus on the environment and water quality, market interaction and furthering current industry programmes underpinning the drive for productivity and the Passion2 Profit programme.

Invitations have gone out to speakers and the event is being strongly supported by the active South Canterbury Branch of NZDFA. On the Thursday (17 May), the branch will host the optional event, a field trip to showcase the extent and diversity of deer farming that traverses the length of Rangitata Gorge and its upper reaches.

DINZ producer manager Tony Pearse says the three days will be interesting, while also adding plenty of value to your business.

"Past events in South Canterbury have also been a great deal of fun and always attracted a diverse, talented group of farmers as well as the industry's companies and our loyal, committed sponsors. It's a proven and successful balance."

He urges farmers and other industry players who haven't been to a conference for a year or two, and in particular the next generation of young deer farmers, to pencil this into their diaries.

Look for further information in the new year.

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A plant to cut nitrogen leaching?

by Phil Stewart, Deer Industry News Editor

Could a pasture herb cut down the amount of nitrogen (N) that ruminants shed in their urine – and help block the pathway from urine patch to waterways? Agricom's Glen Judson dangled that prospect in front of deer farmers at the Focus Farm programme day at Raincliff Station in October.

JUDSON SAID THE biggest environmental impacts on waterways from deer were in the form of sediment and phosphorus losses, as well as *E. coli*. N was not such a big issue in deer but it is an issue for regional councils, especially in the Canterbury region where nitrates in water are of major concern.

He said up to 90 percent of the N that gets into waterways is mediated through animal urine, not through excess N fertiliser getting straight into water. He said an average cow takes N from 140m² of pasture and dumps that as urine on just $3m^2$. Soil bacteria oxidise the N from urine into nitrites (NO $_2$) and then nitrates (NO $_3$) which then leach into groundwater.

Cutting stock numbers or fertiliser use would be very blunt instruments for reducing this leaching, he said. But a new plantain cultivar, Ecotain™, could offer a way to reduce the amount of nitrate getting into water, while maintaining productivity, he claimed.

He explained the plant works in four ways:

Reduce: It cuts the amount of N that makes its way into urine, compared with ryegrass – some is diverted into body maintenance, some to faeces and some into milk.

Dilute: The plant has a diuretic effect, increasing urine volumes and diluting N concentration.

Delay: In urine patches from animals grazing Ecotain, the conversion from ammonium to nitrate is delayed. This gives plants a better chance to uptake the N from urine and reduces potential for leaching.

Restrict: Exudates from the Ecotain plants in the soil act as a nitrification inhibitor, reducing the amount of bacteria that produce nitrates from urine. This effect takes about 12 months to kick in and, in itself, almost halves the amount of nitrate leaching.

Judson said the amount of leaching in pastures where animals are grazing the herb can be reduced up to 89 percent, although others have recorded even greater reductions.

"If we wanted to reduce nitrate leaching by, say 20 percent, a 40 percent Ecotain sward might do it."

Judson said the N-reducing impact of the cultivar still needed to be factored into OVERSEER®, but it could help farmers meet their regulatory obligations. "It's visible, it's natural and it's easy to use. It can be broadcast and treated like a pasture grass."

Once it had been incorporated into OVERSEER, it may be possible to retrospectively deploy Ecotain into the model if you were already using it, he said.

He agreed that the palatability issues that deer had with

plantain at certain times of the year would be no different with this cultivar, but suggested growing conditions and set stocking systems may have a role in this. It could be used as a pure sward in sensitive parts of the farm or as a second or third-order species in a pasture mix in other areas.

Ecotain will be available from autumn 2018 and the price will similar to other plantain cultivars such as Tonic.

For further information: http://bit.ly/2zuRtzS



A natural nitrification inhibitor suitable for deer systems?



Glen Judson explains the ins and outs of Ecotain.

Focus farmers review objectives

by Phil Stewart, Deer Industry News Editor

The Rupert and Morgan families reflected on the good progress they had been making against their business objectives, during the "Feed to Profit" day at Raincliff Station on 26 October.

Raincliff Station

David Morgan said total feed grown at Raincliff had grown by nearly one-third over the past two years, from 9 tonnes/ha to 11.85 t/ha. This had partly come about through the intensive regrassing programme and extensive use of fodder beet (156ha grown in the past two years, 86ha this year). Lucerne (17ha) has also been planted.

Grazing maize (11ha grown each year for the past two years) was being used to fill a summer feed hole for dairy heifers. David commented that the dairy grazers were high maintenance and he has been cutting back numbers in favour of dairy bull beef, which gives more flexibility in the system.

Attention to body condition score (BCS) at mating has been rewarded with improved scanning results over the past three seasons. BCS for all age and breed classes of hind have been lifted to 4.0 this year (3.0 is generally considered an acceptable minimum). Elk/wapiti and reds, including first and second calvers,



Long-term development work at Raincliff has pushed up farm working

continued on page 32



Objectives: continued

scanned at between 92-96 percent this year, up on earlier years.

Weaning weights for all stock classes at Raincliff have also been creeping up. This year the reds had weights of 59kg and 53kg for the stag and hind fawns respectively, and 78kg and 73kg for the elk/wapiti weaners.

The drive to grow more feed has been matched, as expected, by product sold per hectare. This has grown from 223kg/ha to 294kg/ha in the past three years. A reduction in kg liveweight in the dairy support class has been more than compensated by stock sales in other classes. Raincliff harvested 7.3 tonnes of velvet in 2016/17, up from 5.8 tonnes in 2015.

Environmental work has proceeded apace, with 5,500 natives planted and some areas fenced off (see separate article on page 26). David said keeping the new plantings alive can be a challenge at times.

On the financial front, Raincliff's per-hectare farm working expenses (FWE) seem to be running quite high at 72 percent of gross farm income. David pointed out, though, that about \$400/ha of the \$2095/ha FWE this year was accounted for by long-term development costs; the percentage would be closer to 58 percent if these weren't factored in.

Gross margin per kg dry matter consumed had dropped a couple of cents to \$0.19 for the most recent year. David said this was partly because velvet had dropped as a percentage of total production.

Rupert Red Deer

The Rupert family have been aggressively building their velvet production and herd size while also focusing on genetic improvement. They are having their first sire sale in January.

Since 2010, their per-animal velvet weights have risen strongly, from a 55 percent lift in the six-year-olds, to an impressive 72 percent gain in three-year-olds. Martin Rupert said the three-year-old weights lifted by 0.8kg in just the past year. While genetics is playing a part, he said they had run the three-year-olds as a separate mob for the first time, and this may also have contributed.

Like Raincliff Station, the Ruperts have been doing a lot of development work (especially fencing) and this has also shown up in their FWE as a percentage of gross farm income. This currently sits at 55 percent, up from 42 percent two years ago. As well as the development, the cost of extra supplement during two very dry years in 2016 and 2017 affected this result. Nonetheless, the family is comfortable with how the business has been performing. EBIT per hectare in the 2017 financial year was \$1,629.

They have also been paying attention to environmental enhancement during the development phase. They have completed a nutrient budget, been doing some planting and fencing (about



Velvet stags at Rupert Red Deer.

90 percent of the waterways are excluded from stock now) and are currently doing a Level 2 Farm Environment Plan.

Reproductive performance in first calvers has been the focus of a lot of effort by the Ruperts and they have set themselves an extra challenge by building numbers of R2s in the breeding herd from 113 last year to 152 this year. Kiri Rupert said this was partly to build numbers of replacements for the velvetting mob, but also to allow them to apply more selection pressure.

They have always achieved quite good scanning percentages for their R2 hinds but this year was the best ever, with 95 percent scanned in fawn. Translating that into reproductive success has been challenging, and final figures have been hovering around the mid 70s over the past couple of years. The Ruperts have been learning a lot about providing a good fawning environment and are hoping this year's crop from the R2s will have a much better survival rate.

Succession planning

Both families are going through succession, with the next generation taking more central roles in the business.

David Morgan said being fair does not always equate with being equal and it can be challenging getting the right balance when it comes to getting your children off to a good start in business. Two of his adult children are now striking out on new business ventures, Brychan running Raincliff Agricultural Contracting and Ellie in partnership in the Farm Barn Café near Fairlie. Their other daughter, Millie is studying law and environmental geography at Canterbury University and is currently in China on a Prime Minister's scholarship.

Kiri Rupert and husband Josh Brook have taken over one of the Ruperts' two farms this year under a new family trust structure. Josh said it was good having Martin on hand and to be able to draw from his experience. "We're not getting ahead of ourselves," he said. "A lot of it is about managing workloads. There's certainly no manual on how to manage succession!"



David Morgan: Being both fair and equal isn't always easy.

Martin admitted that he misses some of the hands-on involvement but knows that stepping back is part of the process. "It's a fine line between letting someone learn from a failure, and telling them what to do all the time."

Facilitator Justin Geary said having a profitable business made things easier for succession planning and leveraging new opportunities for the next generation.

Obituary: Errol Wayne Croad 1948-2017

If you knew Errol Croad, you would be left in no doubt what he was thinking. But beneath a sometimes gruff and blunt exterior was a man with strong principles, fierce loyalty and a passion to do the right thing by his friends, family and the industry he loved.

ERROL PASSED AWAY on 2

November after a short and intense battle with cancer, something he confronted with the same directness that he employed throughout his life. Although he and wife Adele had left deer farming some years earlier, the Croads made an enormous contribution to the industry during a period of great change.

Their farm, Seaview, is in a spectacular setting inland from Otaki on the Kāpiti coast. DINZ Producer Manager Tony Pearse worked closely with the Croads and recalled that during their many years of involvement with deer farming their farm was a regular destination for countless visitors - overseas venison and velvet customers, diplomats, film crews, international deer farmers, politicians, departmental heads and many more. They were always welcomed with grace and warmth.



Adele and Errol Croad.

Errol tackled the challenges at Seaview with unswerving energy - his hatred for possums was said to be eclipsed only by his hatred of ragwort. Discovery of bovine TB in the deer herd was a cruel blow, but met with characteristic fortitude. It was a long and costly battle that was eventually won, and this during a time when the disease was still rampant in many herds around the country. The experience spurred Errol to become active on local TB committees, eventually chairing the National AHB Stakeholders' Committee.

While he had a tough, no-holds-barred approach, a vein of compassion and empathy ran deeply through Errol. This was exemplified during the early 1990s when he was moved by the plight of drought-stricken farmers in Marlborough and coordinated a major relief effort among North Island farmers, coaxing others to contribute and dealing with the tricky logistics of shipping truckloads of feed across Cook Strait.

In 2003, Errol and Adele were Supreme winners of the inaugural Wellington Ballance Farm Environmental Awards as well as the Wrightson Habitat Enhancement Award - worthy recognition for the couple's commitment to caring for their animals and environment.

But leading by example was just one aspect of Errol's contribution to the wider deer industry. After time as Chair of the then Wellington/Horowhenua Branch of NZDFA in the 1990s, he was elected to the NZDFA's national council in 2000. His portfolios of the then AHB, Game and Forest Council, biosecurity and welfare were subjects close to his heart.

Errol helped usher in the reforms that saw the current governance and structures of DINZ and NZDFA established. The cessation of the \$750,000 commodity levy collected yearly to fund the DFA was a big saving for deer farmers. He was made inaugural chair of the new, slimmed-down NZDFA Executive Committee in 2002, a role he maintained during the bedding-in phase until he stepped aside in 2005.

He established strong and lasting relationships with the executive staff and board members of the newly established Deer Industry New Zealand - crucial during a time of upheaval. The legacy of those relationships remains today.

Veterinarian and friend Russ

Beban recalls complimenting Errol on the beautiful farm he was maintaining, during the difficult Rogernomics years when sheep were earning nothing. "You can have the bloody place if you want!" was they pithy reply - characteristic of his bluntness and humour.

Russ said Errol was an early adopter and 20 years ahead of his time: "Walking into his velvetting shed was like walking into a sterile surgery. He was routinely achieving standards of cleanliness and hygiene that have only this year become requirements on all deer farms."

Russ said Errol was always happy to share what he knew, "and to correct you if he thought you were doing it wrong!"

Friend and colleague Vince Connolly recalled Errol's great love of the outdoors, of fishing, whitebaiting and, in recent years, cycling. A painful knee reconstruction a 15 months ago did not hold him back to long and he was back pruning trees and fencing only a few months later.

The deer industry extends its condolences to Adele, to sons Brent with Cathy, and Hamish with Jess, to their five grandchildren and to their wider circle of family and friends.

• Acknowledgements: Adele Croad, Tony Pearse, Jan Richmond, Russ Beban and Vince Connolly.

Deer now have an official birthday

A default birth date of 1 December 2017 will automatically be recorded on the NAIT database for all fawns born this season. The change, which was initiated by DINZ, will take effect this month (December).

UNTIL NOW, THE date of birth field needed to be completed manually by farmers when entering tag numbers on their NAIT account.

DINZ chief executive Dan Coup says that from this season, when farmers tag and register their young deer, the NAIT record will default to 1 December the previous year.

"This will make it easier for farmers who have been manually entering a date of birth. If another date needs to be entered, the default date can be easily changed. Some stud breeders will want to record an actual date of birth and commercial farmers will sometimes need to register an older animal that missed out on being tagged as a fawn," Coup says.

He says having all young deer tagged, registered and agerecorded will enable venison marketers to guarantee that Cervena® animals are no more than 3 years of age, and assist in disease identification and surveillance.

"Date of birth recording provides a means of verification for farmers seeking price premiums from marketers for the supply of deer that have age criteria," Coup says.

"Farmers getting production reports from their venison company or through DeerPRO, will easily be able to compare venison production – not just between years, but between deer born in different years, something that's not easy when mixed lines of animals are being processed or age cohorts overlap."

He says the change will also give the deer industry a much better handle on the age structure of the national herd and how many animals are coming down the venison pipeline.

"That will be a huge help when it comes to industry planning," Coup says.

DINZ producer manager Tony Pearse says the three-year transition phase for the NAIT scheme finished in March 2016 and all farmed deer must have a formally registered NAIT tag at the

time of their first movement from the farm or by six months of age, whatever comes first.

"These are legal requirements designed to ensure that deer and cattle can be traced back to their farm of origin. This is important for the control of TB and would be critical in the event of a biosecurity or product contamination incident," he says.

"Most farmers will be familiar with these requirements, which are also included in the DeerQA On-farm Standards. When a farmer is QA-audited by their marketing company, the auditor may check that deer and cattle over six months old are recorded on the NAIT database."

Pearse says that within reason, the younger deer are when they are tagged, the better.

"A week or two before pre-rut weaning is a good time – it's

easier and safer for farm staff than tagging larger animals. Tagging at weaning is not a good idea. Fawns find weaning stressful enough without the added stress of having a tag put in their

"Tagging weaners early is also a good idea because – in the event of an escape – it provides farmers with formal legal proof of ownership that is accepted by the Police and the courts," Pearse says.



Tag 'em young, when it's easier and safer for farm staff. Legally they must be tagged when they first leave the farm, or at 6 months of age – whatever comes first. Photo: Jamie Ward

Looking to upgrade your deer shed to meet new hygiene regulations?

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Johne's disease, then and now

by Solis Norton, Project Manager, DeerPRO

An overview of the state of Johne's disease (JD) across the deer industry will complement recent articles focusing on its control at farm level. With ten years of monitoring across 4.5 million deer from 4,451 suppliers, the industry has sound facts and figures on progress.

IN SHORT, THERE has been a lot of really encouraging success. The slightly longer story is based on three main points:

1. Lesions are down

The number of Johne's disease-suspect lesions identified at processing by AsureQuality meat inspectors has been gradually declining since 2014. While the lesions are unlikely to ever disappear completely, their decline is encouraging. From 2009–2015, often 15–20 percent of farms each month were sending deer for processing with these lesions (see graph). But in 2017 it was more like 5–10 percent.

2. More farms have JD recorded

The spread of farms with JD deer has gradually increased. This will be partly due to the programme detecting already-infected herds as monitoring data accumulated. But it will also be due to the disease spreading to new herds. The spread of deer farms with JD now looks much like the nation-wide spread of JD we know in the dairy and sheep industries.

3. Big outbreaks less common

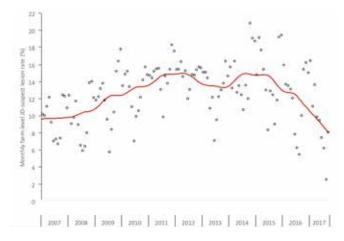
Major outbreaks of JD on individual farms have become less common. They still occur, and in some cases re-occur years after the original outbreak but, across all farms, these events are less frequent. Managing them effectively for minimal cost uses all the tools and expertise we have built up over the years. It is a pleasure to still be deriving such value out of those original investments and to see the progress the industry has made.

Collectively, these three points paint a picture of transition. That is, JD has evolved from the epidemic of the 1990s to more of a chronic, lower-level productivity drain for most deer herds. In this case, it more closely resembles what we see of JD in the dairy and sheep industries: a widespread but typically lower-level

issue except in a small proportion of more severely affected herds. Observing other livestock industries around the world over the past decade, the deer industry has made enormous progress – but there is still work to do.

What of the future?

The deer industry today shows big potential. With supply constrained, exceptional returns, and hard work on the marketing front really starting to pay off, prospects look good. But in a rapidly changing world, consumers are increasingly conscious of food quality and safety, and they are connected to a sea of information. The deer industry's future success depends on proving that it delivers the finest quality, safest food. That proof must be plain to see. The story of JD in deer is a great example of the pursuit of that quality and having the essential facts and figures to back it up.



Percentage of farms per month that had deer identified with JD-suspect lesions at processing.



Health review charting path to healthy weaners

by Phil Stewart, Deer Industry News Editor

If there is one good benchmark for success each year, it's having a big crop of healthy fawns at weaning. That sets you up well for both production animals and replacements. For Corey Busch, who breeds and finishes from 250 Eastern red hinds on 86 hectares at Hororata, that ideal was a bit more challenging this year. But working through the issues with his vet Reuben Brown, they've come up with a sound plan to turn things around.

BUSCH SHIFTED THE herd from Sheffield to his current property three years ago and since then has been facing multiple productivity and animal health issues. A serious outbreak of yersiniosis in his weaners in this year's wet autumn cost him about 10 young animals with many others likely to have been affected by subclinical disease.

Brown got involved as the losses were mounting up. Yersiniosis was always the most likely suspect, but they also tested for leptospirosis, Johne's disease and trace element deficiencies to be sure. In addition to the weaner deaths, the mob had a "long tail".

Yersiniosis was indeed the culprit and to help mitigate the disease, weaners were drenched and treated with an antibiotic.

To top things off, reproductive performance this year was pretty average in the mixed age herd (about 85 percent scanned in fawn) and terrible for the R2s (just 7 percent pregnant).

The system was under stress and it was time to take a step back and look at the big picture. Brown says animal health needed addressing, but had to be seen in context. Feeding was involved and problems that might normally have stayed dormant or subclinical were flaring up under increased stress.

Busch agrees that "a lot goes on when you move farms" and despite looking after the management basics well, health issues were building up.

Brown says his initial report into the yersiniosis outbreak evolved into a fully fledged Deer Health Review using the template developed by Deer Industry New Zealand (https://deernz.org/annual-health-review). This casts a light on the full range of possible health issues in the context of productivity.

He says the process was straightforward. Although some health issues were already obvious, working through all the steps – setting targets, assessing risks and doing an action plan – ensured that productivity issues were being dealt with properly rather than simply "putting out fires".

Because the disease load on the property is likely to be still high, Brown has incorporated a yersiniosis preventative vaccination programme into the plan. Supporting interventions like these is a plan to improve nutrition throughout the year. This had been causing stress, and changes to help address this will include use of Advantage feeders and summer crops to keep hinds in good shape during lactation and leading up to mating. Minimising stress at weaning will also be a big part of this.

For his part, Busch is delighted to have a documented plan

with clear trigger points so he can be more proactive. He will be weighing stock more regularly so that he can intervene earlier if growth rates are lagging. He and Brown are using the DINZ growth charts to help set liveweight targets and monitor progress. They will aim to body condition score the hinds in January to give an opportunity to lift condition in time for mating if necessary, while also reviewing pasture covers and quality.

He says implementing the plan will raise costs, but he accepts that doing nothing also carries a big cost. "We'll be tapping into the full potential of our animals. Getting carcass weights of 55–60kg is better than 45–50kg, especially with the schedule the way it is." And he wants to get first fawners producing properly after this year's reproductive failure. The empties were culled this year, leaving a gap in the breeding herd. "We'll have to persevere longer with some of the older hinds."

Busch is also conscious that you can't fix everything at once, so he's being realistic and methodical – for example, more regular drenching, supplementing hinds with vitamin B12 and selenium before fawning and continuing with copper treatments. He's also planning to pull stags out about 10 days earlier than in the past, avoiding late-born fawns and giving an opportunity to remove late-conceiving hinds from the herd.

"Any deer farmer will get something out of a deer health review. We all might think we're doing a good job, but it doesn't hurt to have someone question what we're doing."

https://deernz.org/annual-health-review



Corey Busch: Pleased to have a documented plan.

Exciting JV with Korean pharmaceutical company

by Phil Stewart, Deer Industry News Editor

The changing shape of the velvet industry became clearer last month with the signing in Wellington of a ground-breaking memorandum between Deer Industry New Zealand and Korea's largest pharmaceutical company, Yuhan Corporation.

THE COMPANY HAS committed to investing at least \$1.5m on research with AgResearch, to be complemented by its own research in Korea. The company has also budgeted for the substantial costs involved with registering a functional food claim and bringing a product to market.

The signing ceremony, on 15 November, was attended by the Ambassador for the Republic of Korea, Mr Seung-bae Yeo, the Chief Executive of Yuhan Corporation, Mr Jung Hee Lee, the Minister of Agriculture, Damien O'Connor, Melissa Lee, MP, Hugh Signal, Director Alpine Deer Products, Tom Richardson, CEO AgResearch, and DINZ CEO, Dan Coup.

Yuhan Corporation signed three agreements: with Deer Industry New Zealand, with AgResearch and with Alpine Deer Group as the supplier of deer velvet.

"This will be a world-first," Mr Lee said. "In recent years a number of Korean companies have developed easy-to-consume formulations of traditional herbal products based on deer velvet, but none have commissioned supporting research in New Zealand to the same level of detail that Yuhan will do.

"AgResearch and Yuhan scientists will be working together to build on existing scientific knowledge. AgResearch is recognised internationally for its knowledge of velvet processing techniques, the composition of deer velvet and the potential health benefits."

Discussions between Yuhan Corporation and AgResearch on the duration and make-up of a research programme were expected to be complete this month, with work starting early next year.

Mr Lee said healthy functional foods based around deer velvet - a beloved traditional ingredient - had been identified as a new market driver. He said AgResearch's deer velvet research experience would combine with Yuhan Corporation's know-how in the pharmaceutical industry to create new markets for New Zealand deer velvet.

Dan Coup said DINZ and Yuhan have a shared interest in the registration of New Zealand deer velvet as a health food.

"If this is achieved it will further strengthen the reputation

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Joint venture: continued

of New Zealand deer velvet as a natural, safe and quality food ingredient in Korea."

He said DINZ will work with Yuhan to help promote the "New Zealand velvet story" and support the successful launch of its velvet products where appropriate.

"The two parties may also co-fund some specific areas of research and marketing activities, but these will be subject to separate agreements."

Agriculture Minister Damien O'Connor acknowledged the pioneering role of Alpine Group in the New Zealand deer industry. He said he was impressed by Yuhan Corporation's commitment of 9 percent of revenue to R&D. While New Zealand was unlikely to be ever able to match that level, he said it set a great example.

Ms Ashley Kyung-in Chung, head of Yuhan's food and health marketing team, said New Zealand was a natural fit with the company's objectives.

"We looked for a partner that could supply ingredients that were very close to nature." She said that encompassed the environment but also the sincere attitudes of the people here and our shared values. Quality was also fundamental to the choice of New Zealand, with standards here higher than in China, Russia or even Korea. That made it easier to develop trust with the industry here, she said.

The velvet-based products would be sold initially in Korea, but Ms Chung said it was likely markets would also be developed in China and other Asian markets as the new products gained popularity.

The velvet would be initially supplied from Alpine Deer Group New Zealand in sliced rather than powdered form, but other forms would be considered later, depending on the types of products developed.

Ms Chung couldn't be specific on the volumes likely to be used, but said it would

be a "reasonable" amount and likely to grow as new markets are developed in Korea, additional to existing markets for deer velvet used in traditional herbal medicines.

Alpine Deer Group would be their exclusive supplier and also their brand partner, meaning the imagery from the Group's iconic high country stations, the heritage and name would feature strongly in marketing.

Yuhan Corporation had a sales turnover of about \$US1.18 billion in 2016. Its mission is to create a balanced portfolio of health food products and supplements and has been awarded the title of most respected company in South Korea for the past 14 years consecutively. The corporation was started in 1926 as a health company. Ms Chung said the development of innovative products based on deer velvet marked a return to the company's origins and complements and extends its pharmaceutical business.



Pictured at the signing ceremony, from left: Melissa Lee, MP, Ambassador for the Republic of Korea, Mr Seung-bae Yeo, Chief Executive of Yuhan Corporation, Mr Jung Hee Lee, Minister of Agriculture, Damien O'Connor, AgResearch CEO, Tom Richardson and DINZ CEO, Dan Coup.





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Venison update

Production

- Production for the 2016/17 year to September totalled 16,630 tonnes (carcass weight), down 6% on the previous year.
- Total kill for the 2016/17 year was 291,000 deer, down 8.5% year on year.
- · Hinds accounted for 48.5% of the total kill.
- The average carcass weight was 57.23kg, up from 55.65kg the year before, a 3% increase. The increased weights may be due to:
 - more stags being run through to two years to assess velvet potential before being slaughtered
 - more deer being kept through to summer to benefit from the relatively higher summer schedule
 - increased growth rates due to reduced stocking rates and better feeding.
- The kill for the month of September was down 33% on September 2016.

Exports

- Total venison export value for the year to September 2017 stayed steady on \$165.1 million despite the fall in volumes.
- Export value for co-products (excluding leather, hides and velvet) rose 24% to \$30 million for the year.
- Germany remained New Zealand's most valuable export market for the year, at \$40.4 million, down 2% year on year.
- The value of the US market grew sharply to \$38.5 million for

- the period, up 38%, and overtaking the Benelux group as New Zealand's second-most valuable venison market.
- Switzerland, the United Kingdom and Scandinavia remain important secondary markets for New Zealand.

Schedule and market observations

- The national average published schedule was recorded as \$10.20/kg (Agrifax) in the week beginning 27 November. This was up 29% on the same week last year and is up 33% on the three-year average.
- The lift in the schedule at the beginning of November (Figure 1)
 reverses the usual seasonal pattern for a fall in the schedule at
 this time
- Exporters report that the demand for chilled and frozen New Zealand venison in Europe is strong as continental Europe eases into the game eating period and restaurants and caterers shift their menus over to focus on autumnal ingredients and hunted items.
- Demand for New Zealand venison remains strong in the United States. The emergence of the pet food market has led to a significant upward valuation of venison trim and some forequarter items.
- The New Zealand market for venison continues to perform strongly for companies investing in local retail sales. Those marketing companies report of year-on-year growth of yearround demand for medallion and mince retail items.

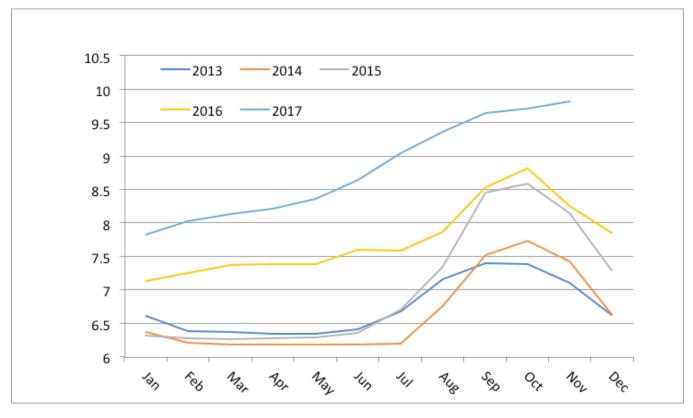


Figure 1: National published schedule: 2013-2017 AP Stag (\$/kg gross).

Velvet update

2017/18 season continues strongly

The strong velvet prices this season are welcome following investment by producers in upgrading facilities as required by the Ministry for Primary Industries' recently implemented Regulated Control Scheme (RCS) for Deer Velvet Harvest.

Early demand from Korea appears to have led the price increase. Some Korean importers had concerns last season of not securing enough stock to meet the growing demand. However, the increase in velvet prices this year has some buyers from China reluctant to commit to large volumes at this stage.

More important is the flurry of activity by Korean food companies keen to promote the New Zealand provenance of their velvet products. This helps to drive underlying demand for New Zealand velvet.

Stream of Korean visitors to NZ

New Zealand's closest Korean partner, Korea Ginseng Corporation (KGC), had three delegations visit during October and November. For the first time, KGC's CEO Mr Park Jeong-Wook spent a few days visiting the home of KGC's nogyong (velvet) ingredient. DINZ CEO, Dan Coup, met Mr Park during his visit to exchange ideas and thank KGC for its support and promotion of the New Zealand velvet industry.



2018

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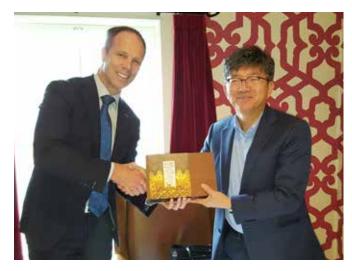
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For a personal viewing contact: Kelly – 0274 234 215 or 03 692 2982 Don – 0274 955 007 or 03 693 7221

> 273 McKeown Road, Woodbury, Geraldine



KGC CEO, Mr Park (right) hands DINZ CEO, Dan Coup, the latest iteration of the successful Cheong Nuk brand: "Everytime".

The following week, the top 20 Cheongnuksam sales representatives and senior marketing executives came to New Zealand as part of an internal KGC sales promotion. This was the third consecutive tour of high-performing sales staff and creates a real buzz among the numerous retail staff over the Chuseok campaign period. Chuseok is Korea's thanksgiving and the biggest gift-giving period. One part of the prize is to visit a New Zealand deer farm. Huge thanks are due to Raincliff Station for showing the group how New Zealand velvet is produced in the world's best environment.

KGC also sent a film crew to New Zealand to undertake a promotional video to use for the coming season and to coincide with a new product launch.

A separate group led by Dr Lee and Lotte Home Shopping Network also bought a film crew to New Zealand (see cover photo). The visit followed a successful launch in January 2017 of Dr Lee's New Zealand velvet product using film shot in Otago and Southland last year. This year the group focused on Hawke's Bay and were treated to superb hospitality from Forest Road Farm,



Dr Lee interviewing George Williams during filming for a new velvet promotion.

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Europe has mojo back but caution urged



by Alison Spencer, Deer Industry News writer

Visiting Europe for the Anuga food trade show, venison exporter Andy Duncan reports, "Europe has got its mojo back," but urges caution around pricing.

THE LATEST DINZ figures show strong demand for both chilled and frozen venison in the region, in part driven by tight supply.

"Early indications are that chilled sales through retail have gone well, despite the higher prices," says DINZ Passion2Profit (P2P) manager Innes Moffat. He points to the latest figures from Statistics NZ which show the average FOB value per tonne of chilled venison exported to the top four markets – Germany, The Netherlands, Switzerland and Belgium – lifted by nearly 9 percent to \$22,440/tonne in the quarter ending 30 September 2017, compared with the previous year.

"Germany was New Zealand's largest market for chilled over this three-month period," he explains.

Duncan NZ chief executive and owner Andy Duncan was in Cologne, Germany, in mid-October attending the giant biennial Anuga food fair. He says feedback from the market in January will reveal how chilled sales have actually gone, but agreed advance

sales have been good so far.

Duncan took the opportunity to introduce two new members of Duncan NZ staff, new marketing executive Jared Sandri and special projects manager Rob Kidd, to contacts at the show. As the 2017 shipments were already on the water, discussions focused on 2017 post-chilled business and early 2018.

Compared with the last few Anugas, relatively subdued following the Global Financial Crisis, this year's show was "seriously busy," he reports.

"It was the first Anuga I've been to where I had to spend a lot of time explaining why supply is so short," says Duncan. But he got a real sense that the upper limit had been reached for prices.

"European customers are very sophisticated and they understand how a period of deer herd contraction, followed by more recent hind retention, has resulted in product shortages."

This has led to premium pricing for New Zealand farmed

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Europe: continued



One of the meat halls at Anuga 2017, one of the best "in a long time". Over 7,400 exhibitors from 107 countries showed their wares to the 165,000 trade visitors from 198 countries. Big numbers coming out of Eastern Europe had a noticeable presence, both as exhibitors and trade visitors, observed Andy Duncan.

venison, which, if not already at the maximum level, is close to it," he says. "We need to be cautious not to push it over the edge."

Exporters report sharp price increases for manufacturing cuts and middles, but those for leg cuts have not risen as steeply.

Duncan noticed, for the first time, New Zealand venison selling at a higher price than Roe deer, which usually commands the premium spot. "This is the real indicator of where New Zealand venison is. Wild boar is much cheaper," he says.

He also believes the volume of New Zealand venison used in the "very price-sensitive" goulash trade could reduce significantly.

"Customers need a product that is fit for purpose – goulash, for example, requires cuts suited to long slow cooking and heavy seasoning. New Zealand farmed venison is not necessarily the perfect fit for this."

Likewise, expensive New Zealand farmed venison leg cuts aren't necessarily the first choice for the further-processed, mid-level catering market, which has strict price limits on raw materials.

The quantity of retail/foodservice-ready portion-controlled product is rising in the region, such as Silver Fern Farms' retail range.

The big advantage for New Zealand venison is its food safety assurance, especially for big retailers conscious of consumer

sentiment, says Duncan.

He was pleased to see, 35 years after the start of New Zealand venison farming, that we are at last making real progress towards market diversification and a healthy reduction in over-reliance on one region.

Duncan NZ is one of the five venison exporters in the P2P programme and one of the four involved in the P2P Benelux programme (see page 13). This is increasing consumption of Cervena® venison.

"We've sent small volumes to our importer Bimpex, which is working with two distributors, Pinke and Geyskens, in an exclusive supply arrangement.

"This exclusivity helps minimise unnecessary price competition. It ensures that each of us targets our own market segment," he explains.

Moffat says the reduction in reliance on the game season trade means the sector's fortunes are not so dependent on consumption at this time of year.

"New Zealand exporters have already indicated a possible price-range post-Christmas as their alternative markets have built to allow an increased degree of certainty in future pricing".

"With a sudden increase in volume unlikely in the coming years for the New Zealand industry, we might be looking forward to a period of stable high prices for New Zealand venison."

 For an extended interview with Andy Duncan: https://wp.me/p2ozLA-49T



Duncan NZ chilled Cervena packed and ready for European customers.

Velvet Market Report: continued

Temco Ag and Smedley Station.

New customers are also coming here to use New Zealand velvet and create their own unique marketing position. In November there was a visit by Kwangdong Pharmaceutical and, as mentioned on page 37, Yuhan Corporation.

Yuhan is Korea's largest pharmaceutical company and is keen on investing in New Zealand velvet-based products. Yuhan's CEO Mr Jung Hee Lee came to New Zealand for the signing of a Yuhan-DINZ Memorandum of Understanding (MOU) along with important agreements with AgResearch and Alpine Deer Products.

The connection with such prestigious Korean food companies really helps to promote the New Zealand velvet story. It provides a more direct connection between producers and consumers and helps to drive consumption and entrench the New Zealand velvet brand.



Yuhan CEO Mr Jung Hee Lee and DINZ CEO, Dan Coup (seated) signing the MOU, witnessed by Agriculture Minister Damien O'Connor (back right) and Korean Ambassador, Mr Seung-bae Yeo.

Arby's sandwiches take off

When you get 107,000 Facebook comments on a product launch – most of them positive – then you know you've got a tiger by the tail.

FOLLOWING THE RUNAWAY success of the Arby's venison sandwich at 17 restaurants in five hunting-oriented US States last year, the fast-food chain has stepped the concept up several orders of magnitude. In 2016 Mountain River provided Arby's with about 225kg of 50z venison steaks, enough for about 1,500 serves. While their US distributor was very keen, no-one was really sure if it would work, but the company wanted to try something new to support its slogan, "We have the meats". In the event, the venison sandwiches sold out fast (see Deer Industry News December/ January 2016).

Mountain River's John Sadler told visitors at the Raincliff Station Focus Farm day on 26 October that Arby's had increased its order 200-fold this year to 300,000 serves, with the sandwich made available in 3,300 Arby's restaurants across the United States (see also Editorial on page 3).

He said he visited the chain's social media room in Atlanta, Georgia and was told that the discussion thread was eclipsed only by earlier Twitter-storms around a cheeky Arby's tweet calling out Pharrell Williams for wearing an Arby's-like hat, and Jon ("The Daily Show") Stewart, who had a running gag taking digs at Arby's - publicity that had actually worked in their favour.

Sadler said the increased demand from Arby's had been challenging for the Mountain River plant, but they had managed to make 240,000 steaks available this year and collaborated with other companies to fill the order, enough for about 70 in each Arby's restaurant. Needless to say, they sold out fast.

"The limited Arby's promotion last year garnered \$10 million worth of exposure in advertising terms through the social media response, with many enthusiastic customers posting video of themselves trying the sandwich and commenting on it. If you Google 'Arby's venison sandwich' you get over 100,000 results. If you Google 'Cervena venison' you get about 60,000. So in less than a year, this has told more Americans about New Zealand venison than 25 years of Cervena promotion."

There is definitely a good market for venison products like

these, Sadler said, but they needed to be developed carefully, particularly supply management aspects.

He said promotions like this helped with the development of a year-round market and also gave an opportunity for some deer to be grown to heavier weights. He noted that the market in Germany was fracturing somewhat, with a clearer separation between game and farmed venison emerging. "Chefs are starting to realise our product is very different to wild venison."

The door to the chain restaurant market had been opened by Arby's, so even if they did not persevere in this space, they had created the opportunity for other chains to add venison to their product range.



Americans went a little crazy for the venison sandwich again this year.



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