



Passion2Profit

## The Deer Industry Profitability Programme

DEER FACTS Breeding

### The CARLA breeding value *Using genes to combat internal parasites*

**Reducing a major farm cost**  
Internal parasites are the biggest single animal health cost for farmed deer, especially in growing animals. Deer with heavy parasite burdens grow more slowly, have higher death rates and are more expensive to feed and treat. Selecting deer on genetic merit for resistance to parasites is a very useful tool to complement drenching and grazing management as part of an integrated parasite control plan. The Deer Select breeding value (eBV) for the level of this resistance is called CARLA.

For more information about breeding values and Deer Select, refer to the 'Deer Select' Deer Fact. [www.deernz.org/deer-facts](http://www.deernz.org/deer-facts)

**How parasite resistance works**  
The larvae of gastrointestinal parasites and lungworm have a sheath that protects them from the environment when they are still on pasture. A few days after L3-stage larvae have been ingested by a grazing animal they shed this sheath. They then develop inside the animal into adults before reproducing.

The sheath includes an antigen, the **Carbohydrate Larval Antigen (CarLA)**. Ruminants, including deer, produce an antibody in their saliva in response to CarLA. It binds to the sheath and limits the parasite's ability to establish in the gut. This is a very effective type of immune response. Without it, the 'downstream' immune system needs to divert energy away from growth and put it into responses to parasite infection like scouring.

**Genetic merit for resistance confirmed**  
The ability of animals to produce the CARLA antibody is variable and moderately heritable (heritability = 0.45). This means it is possible to select animals with higher-

**Key points**

- Deer mount an immune response (known as CARLA) when they ingest parasite larvae from pasture.
- The level of this response in deer varies and is heritable.
- Deer with greater resistance to parasites grow bigger and faster, are less expensive to rear and are more profitable.
- Deer Select breeders can test progeny for CARLA levels. Results are corrected for local environmental conditions and used to create a CARLA eBV.
- Breeding from deer with high CARLA eBVs is another tool you can use to combat parasites as part of an integrated parasite control plan. This might eventually reduce the need for drenches.
- Commercial farmers can also CARLA test their herds. Results can't be compared between farms but they can help identify individuals within their own herd with higher or lower genetic merit for parasite resistance.

than-average resistance to internal parasites. If you breed replacements from these animals, you will permanently improve productivity in your herd.

CARLA testing of progeny was included in the 2012–2014 Deer Progeny Test and the CARLA eBV was introduced to Deer Select from 2017. At the time it was treated as a research breeding value, or RBV. Nonetheless, several Deer Select



Photo: Richard Phipps

Young deer with high genetic merit for parasite resistance can grow faster, earlier

BREEDING 05 / November 2020

*Deer Facts are sources of practical information published to help deer farmers run profitable, resilient and sustainable farming businesses as part of the Passion2Profit strategy. A comprehensive suite of fact sheets has now been developed.*

## Quarterly Progress Summary: October to December 2020

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### Summary of progress during this quarter:

#### Marketing Premium Venison

- Marketing companies have begun planning and rolling out their new US retail Non-seasonal programmes with their US partners
- Marketers will undertake some social listening and research to better understand how consumers perceive and talk about venison in the US
- DINZ and agency Tribal Brand Asia met with all marketing companies and have confirmed the work plan for China market activity in the coming months.

#### Market Led Production

- A deer fact sheet on CarLA was released. CarLA is the first tool in the deer industry to enable selection of deer for resistance to internal parasites
- A successful online technical Zoom webinar on the benefits of genetic planning was held in November to tie in with the start of the stag sale season
- A final report on the genetic DNA proof trial has now been released showing that breeding values have worth in a commercial farm setting
- 15 Deer Industry Environment Groups are currently active and meeting regularly throughout the country
- Another successful deer workshop for rural professionals was held in Wanganui with 20 local rural professionals in attendance
- The Central North Island Advance Party hosted a summer seminar in Ohakune, which was attended and included presentations from NAIT, AgResearch and venison companies
- The Deer Industry Innovation Workshop members have confirmed a third gathering planned in March 2021. The workshop will combine with the Nuffield scholars 2021 intake
- The Bay of Plenty Advance Party hosted an environment focused regional workshop attended by both Advance Party and non-Advance Party members.

#### Work with other PGPs and Government Agencies

- P2P Programme management is involved with the “Farm Planning” and “Extension” workstreams of the He waka eke noa programme, there are eight work streams in total.
- P2P Programme management involved in Red Meat Profit Partnership Action Network Advisory group

### Work with other sector groups

- P2P requested to be involved in the planning of the Massey University veterinary school special interest deer week for students with an interest in deer farming
- AgResearch consulted on the development of a deer fact sheet on CarLA.
- Including non-deer farmers in Deer Industry Environment Groups.
- Staff of DairyNZ and Fonterra involved in the Deer Innovation Workshop project teams.
- P2P Programme management are involved with Deer Industry NZ's science innovation steering group committees.

### Upcoming

- Big Deer Tour scheduled for week commencing 12 April 2021.
- Undertake high level scoping of potential markets for marketing companies to work together on.
- Continue US retail programme activities including social listening research.
- Share findings and data from the genetics DNA proof trial with industry.
- Undertake research into venison use in China as Chinese cuisine and develop digital assets for market promotions.
- Continue investigations into on farm business planning needs and decision support, develop prototypes for market testing.
- Confirm programmes for the technical workshop in Invercargill in May as well as the tech expo in the Manawatu in July.

### Investment

<b>Investment period</b>	<b>Industry contribution</b>	<b>MPI Contribution</b>	<b>Third Party</b>	<b>Total investment</b>
<i>During this Quarter</i>	\$133,651	\$132,319	--	\$265,970
<i>Programme To Date</i>	\$5,845,219	\$5,330,196	\$96,880	\$11,272,295

### Overview Table December 2020 Quarter

Objective	Status			Comment
	Timetable	Financials	Outcomes	
<b>Project 1. Confirm Target Markets.</b>				Companies have discussed potential new market opportunities and agreed to undertake high level investigation before committing to more detailed collaborative market research.
<b>Project 2. Establish Commercial Distribution</b>				Companies have begun planning and rolling out their US retail programmes as part of the new non-seasonal promotion programme.
<b>Project 3. Link Market to Producer</b>				Continue to encourage uptake of On-Farm QA and provide assistance to companies where necessary.
<b>Project 4 Overarching Production Initiatives</b>				Projects underway for the year after a disrupted 2020 due to Covid-19.
<b>Project 5 Engagement for Practice change</b>				Four successful regional workshops were held in the quarter attended by both AP and non-AP members.
<b>Project 6 Technology Packaging</b>				Genetics DNA proof trial now complete. Prototyping of a DIEG online to continue.
<b>Project Management</b>				The marketing programme has commenced investigation into more collaboration projects between companies. Annual plans for the year now underway.

### Trend Table showing last quarter performance and next quarter projection.

Objective	Status					
	Timetable		Financials		Outcomes	
	Last Quarter	Next Quarter	Last Quarter	Next Quarter	Last Quarter	Next Quarter
<b>Project 1.</b>						
<b>Project 2.</b>						
<b>Project 3.</b>						
<b>Project 4</b>						
<b>Project 5</b>						
<b>Project 6</b>						

	Project on track (Financial variance <10%)
	Slight Variation to Plan (To be completed within 3 months : Financial variance 10-25%)
	Project variation to plan (More than 3 months to complete : Financial variance >25%)
	Significant Variation (Change in programme required)

## Financial Summary of P2P Expenditure to date.

P2P Implementation to 31 December 2020	Dec Quarter 2020			End of Year Variance Notes
	Actual	Budget	Variance	
Project				
1 Confirm Market Requirements	\$ 30,769	\$ 28,923	\$ 1,847	Activities tracking close to budget.
Cash	\$ 13,206	\$ 16,006	6%	
Est. in-kind	\$ 17,564	\$ 12,917		
2 Establish Commercial Distribution	\$ 24,410	\$ 112,346	-\$ 87,936	Timing of budget phasing and invoices not received for China work to date. Expenditure to be incurred later into 2021.
Cash	\$ 10,229	\$ 78,979	-78%	
Est. in-kind	\$ 14,181	\$ 33,367		
3 Linking Market to Producer	\$ 27,782	\$ 26,396	\$ 1,387	Activities tracking close to budget.
Cash	\$ 9,786	\$ 9,479	5%	
Est. in-kind	\$ 17,996	\$ 16,917		
4 Overarching Production Initiatives	\$ 37,910	\$ 29,546	\$ 8,364	In-kind time increase in the quarter planning for the years activities. Rural professionals expenditure incurred earlier than expected.
Cash	\$ 19,052	\$ 20,879	28%	
Est. in-kind	\$ 18,858	\$ 8,667		
5 Practice Change	\$ 105,759	\$ 174,516	-\$ 68,757	Less Advance Parties meetings in the quarter than expected as well as AP facilitator and chairs training, expenditure to incurred later into 2021.
Cash	\$ 69,747	\$ 129,729	-39%	
Est. in-kind	\$ 36,012	\$ 44,787		
6 Technology Packaging	\$ 39,340	\$ 80,021	-\$ 40,681	Less activity and meetings of DIEGs than expected and additional Project Manager(s) yet to be appointed. Expenditure to be incurred later into 2021.
Cash	\$ 21,205	\$ 60,854	-51%	
Est. in-kind	\$ 18,135	\$ 19,167		
<b>Total</b>	<b>\$ 265,970</b>	<b>\$ 451,747</b>	<b>-\$ 185,777</b>	
Co Investors Contributions: Cash	\$ 72,278	\$ 162,964		
Co Investors Contributions: In Kind	\$ 61,373	\$ 67,910		
<b>Co Investors Contributions: Total</b>	<b>\$ 133,651</b>	<b>\$ 230,874</b>		
Sought from PGP Funding	\$ 132,319	\$ 220,874		
<b>Total</b>	<b>\$ 265,970</b>	<b>\$ 451,747</b>		

### Recommendation:

Programme Management is satisfied that the above is a true and accurate record of expenditure incurred in implementing the P2P Programme and that the estimated in-kind values are an appropriate reflection of industry contributions to this programme over the period and recommends that the PSG approve this report to be forwarded to MPI for approval of payment.

*P McKenzie, N Taylor, 01/02/2021*

## Passion2Profit Programme: Project Status Update Oct - Dec 2020

	On track		Major variation
	Minor variation		Project on hold
	Complete		Not yet commenced

### Marketing Premium Venison

<b>1.2 Niche Market Feasibility Studies</b>	
<b>Objective:</b> Provide the MWG market scoping for a potential new market.	<b>Status:</b> Scoping now underway.
<p><b>Recent activity</b> The MWG met in November and discussed potential new market opportunities for DINZ to undertake high level investigation before committing to more detailed market research. This also included determining criteria for the high level scoping.</p> <p><b>Next Steps:</b> DINZ to undertake high level scoping of potential markets to then report back to the MWG.</p>	
<b>2.3 Non-Seasonal Promotion</b>	
<b>Objective:</b> Increase amount of New Zealand venison being sold to consumers through online and retail channels in the US.	<b>Status:</b> Project underway. Targets metrics to be confirmed.
<p><b>Recent activity</b> DINZ has transitioned the Summer Cervena™ programme out of the P2P programme to allow funding to be directed to programmes with more collaboration between marketing companies in US online and retail channels. The intention is for the Summer Cervena programme to continue with funding coming from DINZ.</p> <p>Companies have begun planning and rolling out their retail programmes with their US partners. Companies agreed the metrics for the programme at their meeting in November and will provide targets for their retail programme early in 2021 as well as actual sales at the end of the promotional period (volume of sales).</p> <p>The MWG have agreed to undertake some social listening to better understand how consumers perceive and talk about venison in the US.</p> <p><b>Next Steps:</b> Undertake social listening research, companies continue to implement their marketing plans.</p>	
<b>2.3b New Markets - Marketing Pilot (China)</b>	
<b>Objective:</b> Marketing companies sell 500 mt of venison through collaborative venture in new market segments.	<b>Status:</b> Three companies now active in China.
<p><b>Recent activity</b> Marketing companies are in active participation with their Chinese representatives. DINZ and Tribal Brand Asia (TBA) agency met with all the companies to agree the work plan which will be rolled out over the next few months.</p> <p>Companies discussed the proposed P2P targets and felt these did reflect the objectives of the programme (to stimulate growth in the food sector). Companies have agreed to provide DINZ their targets for the food service sector which DINZ will collate and share with MPI early 2021.</p>	

**Next Steps:**

Undertake research into venison use and Chinese cuisines and develop digital assets.

**3.1 Industry Agreed Standards**

**Objectives:** 50% of farmers compliant with On-Farm QA by 30 September 2021.

**Status:** Project ongoing.

**Recent activity**

No update this quarter.

**Next Steps:**

Continue to encourage uptake of On-Farm QA and provide assistance where necessary to companies.

## Market Led Production

### 4.1 MLP Project Governance

**Objective:** That the P2P programme funders feel the programme is well managed and successfully implementing actions in order to achieve the programme goals.

**Status:** Underway

**Recent activity**

P2P Annual Plans for the 2020-21 year now being implemented.

### 4.2.1 Workshops for Rural Professionals

**Objective:** At least 40 rural professionals attend a deer training course.

**Status:** On track

**Recent activity**

An introductory workshop for rural professionals was held in Wanganui on 19 November 2020 with 20 rural professionals in attendance. A further two workshops have been confirmed for Coleridge Downs, Rakaia Gorge, Canterbury on 11 and 12 February 2021.

**Next Steps:**

Hold the dates in February in Canterbury.

### 4.2.3 Influential Advisors

**Objective:** Develop and implement a micro credential (or equivalent) deer systems qualification to align with industry certification.

**Status:** Underway

**Activity in Quarter:**

A stakeholder matrix of influential advisors was completed in 2020 for communication purposes. Work will now shift to evaluating industry certification for an appropriate deer qualification.

**Next Steps:**

Evaluate industry certification for an appropriate deer qualification.

### 4.3 Big Deer Tour

**Objective:** Up to 10 University students enjoy an introduction to the New Zealand deer industry.

**Status:** On track for April 2021 delivery.

**Recent activity**

Planning underway for the tour to take place in April 2021.

**Next Steps:**

Visit both Lincoln and Massey Universities to promote the tours, present to lectures classes and hold on site venison BBQs.

### 5.1 Advance Parties

**Objective:** Up to 30 APs operating with Advance Party members demonstrating gains to their wider community which encourage adoption. Opportunities may differ between group members.

**Status:** 27 APs currently operating.

**Activity in Quarter:**

18 AP meetings were held over the quarter, slightly down on the last quarter due to farming commitments. Most groups now have a current annual plan in place which is due for renewal in the first half of 2021. Planning is underway for online meetings of all facilitators as well technical workshops in both Southland and the Manawatu in 2021.



<p><b>Next Steps:</b> Continue to follow up with those APs still to complete an annual review of their AP.</p>	
<p><b>5.2 Deer Farming Regional Workshops</b></p>	
<p><b>Objective:</b> To expand the farmer centric learnings from Advance Parties to a wider farmer and rural professional audience by using the DFA branch network to connect with non-AP members. Run up to 10 Regional Workshops between 1 October 2020 and 30 September 2021.</p>	<p><b>Status:</b> Planning underway.</p>
<p><b>Activity in Quarter:</b> Ruminant Nutritionist Trish Lewis visited the Hawkes Bay and Kaipara APs holding days focused on silage in October 2020. The Central North Island AP hosted a successful summer seminar in Ohakune on 25 November with presentations by NAIT, AgResearch and two venison companies. An environment workshop was hosted in association with Bay of Plenty AP.</p> <p><b>Next steps:</b> More upcoming dates to be booked.</p>	
<p><b>5.3 Business Management and decision support</b></p>	
<p><b>Objectives:</b> All farmers to be aware that good management relies on appropriate information. To have access to helpful guides to decision support tools. Industry accepted performance indicators for productivity and profit established as well as terminology for profit and productivity KPIs in use.</p>	<p><b>Status:</b> Underway.</p>
<p><b>Activity in Quarter:</b> Continuing investigation on business planning and decision support for farmers following on from the series of semi structured interviews held with farmers in Southland/ Otago/ South Canterbury in the last quarter. Work is also underway to analyse past attendees of rural professional workshops and others with expertise to work with deer farmers across a range of areas.</p> <p><b>Next Steps:</b> Develop business planning and decision support prototypes for market testing.</p>	
<p><b>5.4 Deer Facts</b></p>	
<p><b>Objective:</b> To distribute one new deer fact in 2020-21</p>	<p><b>Status:</b> Complete.</p>
<p><b>Activity in Quarter:</b> A fact sheet on CarLA, carbohydrate larval antigen which is a saliva test which measures antibodies triggered when animals ingest internal parasites was released in December 2020.</p> <p><b>Next Steps:</b> A comprehensive suite of fact sheets have now been developed as the one source of agreed knowledge. Assess the need for delivery of further fact sheets on a case by case situation.</p>	
<p><b>5.5 Practice Change Activities</b></p>	
<p><b>Objectives:</b> Engagement opportunities between farmers and advisors that encourage change. Farmers adopt new technology or information which assists their productivity.</p>	<p><b>Status:</b> Planning underway.</p>
<p><b>Activity in Quarter:</b></p>	

- The Central Regions Deer Farmers Association branch has volunteered to host a **Deer Tech Expo** in 2021 in the Manawatu for June/July. The branch have indicated a wish to combine a technical expo with some topic workshop sessions.
- The **Deer Industry Innovation Workshop** group have confirmed a third gathering planned for 11 and 12 March 2021 in Canterbury. The workshop will combine with the rural leaders group and Nuffield scholars 2021 intake on day one.
- A **National Technical Workshop** is being planned for 20 May 2021 to be held in conjunction with the industry conference in Invercargill. The programme and topics will be confirmed in early 2021.

**Next Steps:**

- Continue to work with the Central Regions DFA branch to plan the programme and venue for the Tech Expo in June /July 2021.
- Confirm the programmes for the innovation workshop as well as the technical workshop in May.
- Use of technology and integration of webinars will form part of the above events.

**5.6 Integration Projects**

**Objective:** Projects which give farmers and rural professionals the confidence to make positive changes to their farming operations. Opportunities to deliver deer specific knowledge within existing groups e.g. input and output supply groups and catchment groups.

**Status:** Planning underway.

**Activity in Quarter:**

1. **Farmer user groups:** No update in the quarter.
2. **Parasite management workshops:** A review workshops held last year was undertaken, more workshops will be held if there is demand.

**Next steps:**

1. Plan for more integrated workshops for the coming year.
2. Continue discussions with the NZVA around areas to work together.

**6.1 Improved Breeding Planning**

**Objectives:** Increase the rate of genetic gain in the deer industry to improve profitability and to pick up research outputs and package them up in ways which make it easy for producers to put them into practice.

**Status:** Ongoing

**Activity in Quarter:**

1. **DNA proofs:** A final report of the proof trial has now been released after collection of final weights with resounding conclusion that breeding values have worth in a commercial farm setting. Share findings and the trial data with industry.
2. **Promotion of Breeding Planning:** A successful online webinar outlining the opportunity that deer genetics presents on farm and the benefits of successful genetic planning was held in November to tie in with the start of the stag sale season. Articles and advertisements in the Deer Industry News publication as well as Countrywide magazine also contributed to awareness and messaging.

**Next Steps:**

1. Review the project and follow up news articles with the farmers involved and their experiences.
2. Continuing promotion via print, social media and other online material.

**6.2 Strategic Feeding**

**Objective:** To create measurable change in farmers' awareness and application of proactive feed management in order to provide optimal feeding for deer production.

**Status:** Ongoing

**Recent activity**

Ongoing work on a body condition score chart for hinds as a Guide to Seasonal Hind Body Condition.

**Next Steps:**

- Test with farmers before distributing the Hind Body Condition tool for use.

**6.3 Improve Deer Health**

**Objective:** To support the work of veterinarians both practicing and in training with information and farmer engagement activities. By the end of 2021 to have developed a programme of integrating animal health planning and awareness into the whole farm system and plan.

**Status:** Underway

**Recent activity**

- P2P Programme management and DeerPro visited farmers in Southland/ Otago/ South Canterbury last quarter to survey farmer needs and a value proposition that would appeal to them for a business facilitation service. This was a result of a recommendation from the DINZ health strategy review in 2019.
- An approach has been made to DINZ from the Massey Vet school to assist with the planning of their deer special interest topic week in May 2021. DINZ will organise deer farms to visit as well as present to students over the course of the week.

**Next steps:**

- Ongoing investigation into the facilitation service.
- Continue to assist Massey with the deer special interest week and hold discussions with the NZVA around areas to work together.

**6.4 Environmental Stewardship**

**Objective:** To find and encourage adoption of solutions to the environmental constraints on deer farming. 100% of deer farmers have a written farm environment plan by end 2023.

**Status:** Underway

**Activity in Quarter:**

- 15 Deer Industry Environment Groups (DIEG) currently active and meeting regularly.
- Continuing prototyping of a DIEG online. This was partially successful for building awareness of environmental risks and opportunities, but also pointed to a need to view practical examples on subject farms.

**Next Steps:**

- Further refine the online resource to assist groups in developing their FEP.
- A survey of farm's completion of FEPs is planned for mid-2021, and considering opportunities to combine with any other surveys being completed.

**7. Programme Management**

**Activity in Quarter:**

P2P Practice Change Managers met 02 November  
MWG met 26 November  
P2P-AG met 16 December.

**Upcoming:**

MWG to meet 25 March  
P2P-AG to meet in March 2021.