

## Deer Industry Advance Parties: farmer groups lead practice change for improved profit

I Moffat<sup>a</sup> and GW Asher<sup>b\*</sup>

<sup>a</sup>P2P Manager, Deer Industry New Zealand, Wellington; <sup>b</sup>Agresearch Ltd, Invermay Agricultural Centre, Mosgiel

\*Corresponding author. Email: geoff.asher@agresearch.co.nz

### Abstract

The NZ deer industry's 'Passion2Profit' productivity improvement programme, launched in 2013, established 'Advance Parties' (APs) to improve profitability among New Zealand deer farmers. Animal performance on farms was highly variable, and sometimes well below potential productivity, despite a large body of knowledge from prior research investments aimed at optimising animal performance. APs are small groups of like-minded farmers focussed on helping each other implement changes in their businesses. The benefits of these changes are disseminated to the wider deer farming community through various industry communications and regional workshops. As of December 2018, there are 27 APs, with the aim for 30 on an ongoing basis, which would involve approximately 350 deer farms. This paper describes the history, functioning and measured outcomes of APs within the New Zealand deer industry.

**Keywords:** Deer Industry New Zealand; Passion2Profit; deer-farming practice change

### Introduction

Deer Industry New Zealand (DINZ) identified that deer farming required a transformational change to improve productivity and gain the confidence of the entire industry that its profitability was at least competitive with alternative land uses. The national deer herd had fallen from a peak of 1.7 million in the early 2000s to under 1 million in 2015 (Statistics New Zealand National Agriculture Survey 2015). Without change, the New Zealand deer industry would likely continue to decline and miss the opportunity to derive full market value from farmed-deer products.

A minority of leading farmers had shown that integrating the best scientific knowledge on deer feeding, animal health, and genetics into farm systems resulted in delivery of favourable returns from deer farming. Those practices had not, however, been packaged into forms or systems that the majority of farmers choose to use or were capable of deploying.

New Zealand's five major venison marketing companies and the New Zealand Deer Farmers' Association (NZDFA) agreed a programme of work that endeavours to create transformational change in the New Zealand venison industry, which is being delivered by their industry-good organisation, Deer Industry New Zealand (DINZ). This programme is called Passion2Profit (P2P). Central to the P2P is the Advance Party project; a means of providing deer farmers confidence, skills and motivation to make changes to their management to improve the profitability of their deer farming operations.

**Passion2Profit:** The P2P is made up of two groups of interlinked projects: **Project 1 - Marketing premium venison:** aims to increase the amount of venison sold year-round in chilled form at higher prices, through collaborative branding and positioning of New Zealand venison in new markets or new market niches, and **Project 2 - Market led production:** aims to develop the systems that will "power up" farmers' ability to respond to current and future value drivers. Project 2 is employing a two-pronged approach;

firstly, packaging the new farming knowledge, technologies and guides into forms and systems easily usable by farmers, including those around feeding, genetics, animal health and environmental management knowledge. Secondly P2P has created new opportunities for farmers to work with each other to apply improved farm management practices.

**Barriers to adoption:** A report into deer farmers' attitudes to change (Hudson & Hawksley 2011) highlighted that the four main incentives to change were improving the productivity, profitability and sustainability of farmers and improving animal welfare. What had been missing were consistent commercial signals to describe and encourage the required changes, and the structures to break down the barriers of change. A recent notable enabler of producer change was individual electronic identification of deer. Producers need to be able to capture the benefits of adopting new technologies. These benefits may include labour and time saving, management simplification, or user reassurance. Simply describing an increase in outputs or potential increase in profit was seldom enough to motivate change if the outcome was uncertain, or the practice difficult to adopt.

Achieving 'Practice Change' is a critical element of the P2P and will primarily determine whether the P2P is successful or not. If knowledge of how to implement farming systems that deliver market requirements exist, the critical challenge becomes engagement with farmers to drive adoption of those systems.

Deer Industry New Zealand have developed the philosophy that personal attitude to change is based on several factors, including motivation (e.g., profit, altruism, peer recognition, legacy, and competing priorities), confidence (e.g., self-belief, past success or failures, peer, advisor, or family support) and ability (e.g., skills, knowledge, experience, debt levels). Tactical practice change initiatives are operational, on-the-ground tools, which drive behaviour change (G.Sheath pers.comm.). The Deer Industry has an array of traditional practice change

engagement strategies in place (e.g., Focus Farms) which have had success, but with limited reach. P2P has developed, and is trialling, some innovative new practice-change engagement strategies. A central means of encouraging the adoption of the new technology and implementing change in the P2P programme is the Advance Party project.

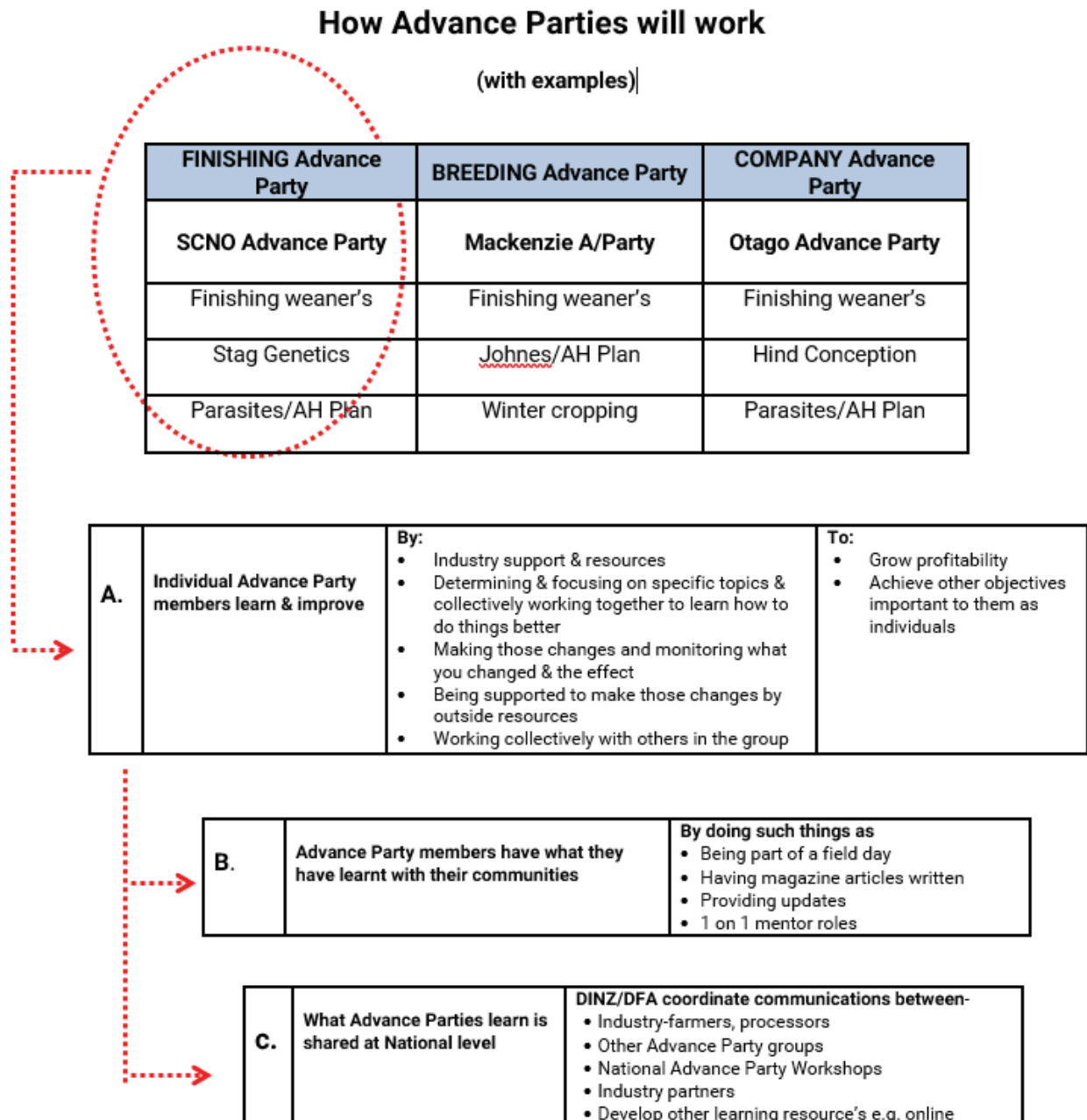
**Materials and Methods**

An Advance Party (AP) was designed as a well-supported group of motivated deer farmers who identify opportunities for, and implement, changes to lift profit on their individual farms. There are generally some elements

of farming practice that are common to all APs. Change is facilitated by group learning; trialling different changes as part of a supportive group to see their effect on profit and sharing the results with the wider deer farming community to encourage wider adoption of successful changes. Figure 1 shows the process in a simplified way.

Each AP has about 10 farming businesses. Importantly, all key decision makers from each farming business, especially the spouses in farming families, are encouraged to participate in the AP. Advance Parties provide a supportive environment that encourages producers to learn from others' experiences and implement new management technology

**Figure 1** Diagrammatic model of the DINZ Advance Party (AP) process. Individual APs (top layer) are voluntary groupings of localised farmers with shared improved-productivity aspirations across one or more themes. The APs are self-mentoring (second layer) but link into DINZ resources (bottom two layers) for support and to ensure their experiences are shared across the entire industry (reproduced from Deer Industry Advance Party Guidelines for Facilitators v 1.2).



or practices that improve their deer-farming enjoyment and profitability. Results of these farmer-led changes are disseminated through the wider deer-farming community, using traditional engagement approaches, helping to lift the prevalence of the most-effective management techniques until they become common practice.

APs are not traditional farm discussion groups, which are facilitator-led and tend to focus on historic outcomes of management decisions on a single farm, with limited input from other farmers. Successful APs are farmer-led and in which members mentor each other through change. A commissioned email survey of AP members found that most were motivated to make a change when they are advised to do something by their peers, and they see successful examples being used on other's properties (Hudson & Hawksley 2016). APs must be facilitated in order to ensure good group function, but the most successful ideas come from the farmers, not the outside experts. Group members must be committed to share personal and farm business development that includes sharing their data, methods, plans, results, problems and successes. They are not for the group alone but are a means to test and refine opportunities for profit, and to demonstrate those methods (and their limitations) to the wider deer farming community. APs are supported by DINZ and run collaboratively by a chair nominated from within the group members and an independent facilitator. Their roles are defined below:

**The DINZ role:** DINZ provides financial resources and support for the management of APs. DINZ project manager(s) provide oversight and monitoring of the Advance Party initiative. They are the first point of contact for the AP facilitators and chairs who are seeking guidance.

**The Chair's role:** Each AP appoints a chair from within their members to lead their group. The chair leads meetings and works with the facilitator to organise meetings and resources. The chair is also an active member of the AP working to implement improvements on their own farm.

**The Facilitator's role:** The facilitator coordinates the group by following a well-structured process and aims to instil confidence in the members so that they build trust between each other. Facilitators do not advise a group where their focus should be, or answer questions, but rather create the atmosphere where the group members collectively develop and brainstorm potential issues and solutions themselves. All successful rural programmes have a key individual who maintains the drive or focus within a group. The AP facilitator is there to act as the motivator for the group. The facilitator keeps a record of key objectives, issues and statements made within each AP meeting to ensure that records of agreed actions are kept to ensure that progress to be monitored. This is also kept as a record of the AP day at DINZ and circulated to group members after the meeting.

DINZ has a goal of operating up to 30 APs at any one time. The AP programme was launched with assistance from the Ministry for Primary Industries (MPI) Sustainable Farming Fund. Once proof of concept was established,

funding has come from DINZ and the Primary Growth Partnership. DINZ used the NZ Deer Farmers Association branch network to form the first round of APs.

## Results

### *Recruitment and early outcomes*

The first advance party was formed in early 2014 in the MacKenzie Country (central region within the South Canterbury province). Managers and owners of six properties were invited to attend early meetings by a leading farmer from the district. A common characteristic of all these properties was that deer comprised the third class of livestock (i.e., merino sheep, cattle and deer) on these extensive high-country runs, often the lesser component in terms of overall stock numbers. Only one of the group weighed their deer, and no one undertook body condition scoring, or collected production data suitable to produce productivity metrics (e.g., kg venison produced per kg live hind mated). Most were questioning the role deer had on their properties. Anecdotal evidence suggests that after two years, deer numbers had expanded on the Mackenzie Country properties. All the AP members had weigh scales and were monitoring deer performance and all the AP members expressed excitement about the potential for deer on their properties. The members of the group observed that one unexpected benefit they got from involvement in the AP was that during the 2014/15 drought they were able to discuss their personal situation with others in a supportive atmosphere, which helped them take the steps needed to manage through a stressful time. Members of this group continue to enjoy working together to focus on the long-term profit of their deer farms. A similar transformation in attitude toward deer and farm management has been noted by facilitators in other Advance Party groups.

### *Monitoring: change from "data driven" to "documenting change"*

Initially, APs were to be project focussed and data driven. Individual farmers were to regularly collect data on their operations and provide updates to monitor progress against targets, and comparisons could be made across groups to observe the rate of change. However, differences in farm-management systems and recording made meaningful between-farm comparisons difficult, and DINZ acknowledged the practical difficulties and resistance to data collection and production recording among deer farmers. In practice, few of the deer farmers in Advance Parties undertook performance monitoring of venison production. But all were keen to make changes that they felt would improve their deer-farming operation. AP facilitators are now tasked with collecting records of the actions that individual farmers take and what changes they make. What was the initial issue/opportunity, what did the farmers do, what was the outcome, and would they do it again? This process of documenting change, taken from the farmer's perspective, is expected to provide a record of the 'real world' experiences of producers which farmers may find more relevant than a data-centric report.

An initial report was undertaken by AgResearch (Peoples 2014) on the attitudes to change among AP participants. A total of 25 telephone interviews were completed over two months in early 2014. Broadly, the report indicated that farmers who had recently joined APs were keen to advance the production and profitability of their deer-farming operations but were not assessed as innovative or industry leaders, therefore, were less likely to change than were producers who were rated as ‘innovators’ (Hudson & Hawksley 2011).

An important component of the programme is monitoring changes among members. Advance Parties are monitored for member engagement, meeting frequency, member satisfaction with facilitator, and forward planning. A successful AP is one that has a high level of regular attendance, has a plan for future events and results in farmers feeling more empowered to manage their deer operations. An email survey to 177 AP members in 2016, that had a 51% response rate (Hudson & Hawksley 2016), found that 57% were planning to expand the deer component of their farming operation over the next five years, 73% attributed their motivation for change as a result of being a member of an AP, and 70% gained confidence to seek more information and make practice changes as a result of being an AP member. Farmers report that, due to their involvement with an AP, the most useful change (36% of respondents) was to the quantity and quality of deer feed.

This survey also recorded that:

- (1) Those who have been an AP member for 1 to 2 years are significantly more likely than those who have been with an AP for less than a year to say they are more likely to try out new methods and products overall;
- (2) The advice and information from other AP members is considered to be more useful than that of a veterinarian or other sources overall;
- (3) More AP members say that assurance that the change will lift productivity or profitability would make farming practice changes easier overall than any other support in general; and
- (4) Members are most likely to attribute motivation for change, information seeking, and confidence in making changes as being influenced by being part of an Advance Party.

The common elements of successful APs to date have included:

- (1) A strong leader in the group. This is someone who proactively works with the facilitator to agree group priorities, someone who will provide feedback on facilitator performance and who encourages farmers to participate in the group. This could be the facilitator, the chair or one of the farmers. A motivator to encourage involvement and participation is the most important factor contributing to a vibrant group.
- (2) An open and trusting environment. A culture is established in which people will willingly offer opinions, make suggestions and ask questions without

fearing a negative response from individuals within the group.

- (3) Some information for action. Groups are initially reluctant to collect and analyse data; resisting the demand to collect numbers for the sake of it. But, once the group settle upon making changes that can be measured, the conversations, and the sense of friendly competition for everyone’s benefit, become established. Examples of this include; foetal scanning (to allow comparison of pregnancy rates and compare management practices that arrive at higher rates), feed budgeting (often not undertaken on winter crops in some areas that have traditionally relied on grass wintering systems), and weighing finishing animals (provides group members with points of reference to consider their own operations and discuss actions that can be taken to improve profit).

### *Next steps*

DINZ understands that APs need to evolve so that they remain relevant. At the outset it was planned that an AP should have a finite life of about three years. If project based, the AP should have a defined end point so that members knew that they were working toward a goal. The APs have evolved since their inception and it was found that it is only after the group has been meeting for at least a year that the members move on from the easy wins to the more strategic questions about farm-management monitoring. The first round of visits often identified the obvious improvements that farmers probably know they should do, but need the motivation of some scrutiny of their peers to make the changes that will improve efficiency. In many instances we are observing that these obvious fixes occupy farmers’ pragmatic problem-solving approach, but the members eventually move on to consider broader issues of farm systems analysis and management for group action.

Examples of the day-to-day fixes have included application of nitrogen on hill country, realignment of deer yards, extension of reticulated water supply and better netting on fences to prevent fawn deaths. Examples of more strategic projects that whole groups have moved on to have included leptospirosis monitoring and management, group winter-feed options and budgeting, appropriate financial analysis of deer performance, proactive health management and environmental management (e.g., monitoring stream health and water quality).

### *Outcomes to date*

Membership of an Advance Party motivates farmers to improve their deer farming operation. Another email survey of AP members in 2018 (Hudson & Hawksley 2018) reported that after joining an AP the members were more confident in changing their farming practices and introducing new technologies. Examples include pregnancy scanning, weighing finishing deer, feed budgeting, recording deaths, using estimated breeding values for stag selection, using body condition scoring of hinds, introducing new technology such as weigh scales

or EID readers, undertaking annual reviews of production with a vet, completing animal health plans with help from a vet, increased production recording, and receiving annual production summaries from their deer processor.

The practice changes implemented by AP membership after joining, in descending order of popularity were:

- (1) 55% found improving the quality/quantity of the deer feed very useful, quite useful or somewhat useful;
- (2) 35% found undertaking regular body conditioning very useful, quite useful or somewhat useful (38% were doing this before joining an AP);
- (3) 33% found increased production recording very useful, quite useful or somewhat useful (52% were doing this before joining an AP);
- (4) 24% found carrying out a proactive animal health plan very useful, quite useful or somewhat useful (64% were doing this before joining an AP); and
- (5) 21% found introducing new technology such as scales or EID readers very useful, quite useful or somewhat useful (60% were doing this before joining an AP).

The challenge for the deer industry remains how to extend this level of adoption of new practices to non-AP members.

## Conclusions

The APs are proving to be popular with the participants and are resulting in changes being made on individual properties. The benefits of belonging to an AP have been improved animal performance, increased confidence among deer farmers to tackle changes, and improved social

interaction between members. APs need a strong central leader, and a genuine commitment to participate among the members to be successful. The role of the facilitator is important to the functioning of the group; they must allow the participants to own the decisions being made. Deer Industry New Zealand looks forward to expanding the number of APs being operated to reach a goal of 30 operational APs at any one time.

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