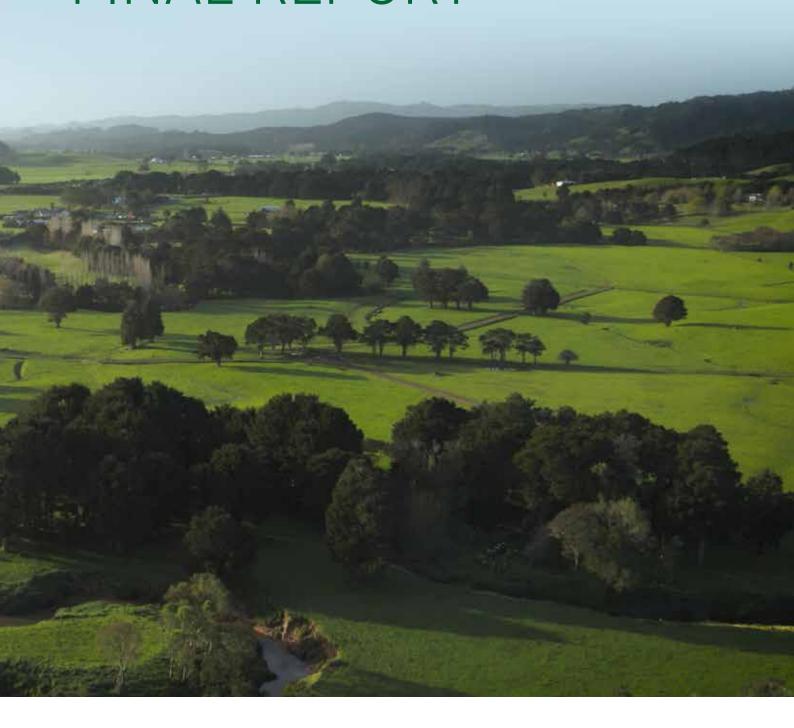


PROGRAMME 2016 - 2022 FINAL REPORT















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A WORD FROM THE CHAIR

In writing this report, I looked back to the first document I had regarding initial planning for Extension 350 (E350) in 2016. The original programme aims were to: raise the profitability of Northland pastoral farming by creating a showcase of target farms, using mentors to accelerate on farm change, and improve farmer networks in all areas of Northland, some of which are very isolated. Reflecting on this, I believe we have succeeded in achieving these aims, and a great deal more.

Fundamental to the success of E350 has been the passion and drive of those individuals who have committed to this programme and then gone above and beyond to achieve success, for both our farmers and our industry, often through challenging times.

First and foremost, I would like to thank all the target, mentor and associate farmers who helped make E350 possible. Our target farmers demonstrated a genuine willingness for improvement by opening up their farms to scrutiny and adoption of recommended changes to farming systems. Mentor farmers generously gave their time, advice and knowledge to target farmers and provided valuable support alongside the farm consultants, while associate farmers showed a real interest in identifying opportunities for improvement.

I would like to thank our funders, Ministry for Primary Industries, DairyNZ, Beef+Lamb New Zealand, Northland Regional Council and Northland Inc, for not only the funding provided but also the extensive in kind contributions through support and resources for the farmers. These organisations also supported staff representatives on the E350 steering group, which helped to drive the success of the programme.

Behind the scenes, the project team was instrumental in ensuring delivery of the programme. In the field, the farm consultants, DairyNZ and Beef+Lamb New Zealand consulting officers provided the glue that held the clusters, and ultimately the programme, together. Without your expertise, commitment and willingness to support our farmers, E350 would not have been possible.

I am grateful to all the members of the E350 steering group and operational groups over the past seven years who supported me with leading the strategic direction of the programme, often adapting and evolving to meet changing needs in the face of external pressures.

On reflection, there have been countless successes to emerge from E350, with the following being the highlights for me.

- The collaboration that was demonstrated across the sectors in Northland has been fundamental to E350's success outcomes. This unique cross-sector sharing of knowledge and processes has been acknowledged and appreciated by all parties, with invaluable collaboration between industry professionals such as farm consultants, Northland Regional Council land advisors and Fonterra to ensure a unified approach that would help ensure the best outcomes for our farmers.
- E350 has proven to be a financial success, with a sound cost benefit return. This is particularly impressive for a project that also put extensive time and resourcing into other targeted outcomes (improved environment and farmer wellbeing) that were not measured in the financial metrics.
- We managed to keep the programme going through the onslaught of COVID-19 and the subsequent disruptions and challenges to farming supply chains and physical engagement that lasted more than two years. While this created additional pressures, it also increased the uptake of other forms of engagement and information transfer, like virtual meetings and our 'What's on your mind?' videos.
- E350 was designed on a premise that farmers learn best from other farmers and the connections that were created between target and mentor farmers through the programme is testament to the power of peer-to-peer learning. Cluster chat groups have been particularly successful in some clusters and are enduring today, showcasing improved networks and long-term programme benefits.
- Farmers involved are in a better place environmentally, with all target farmers having completed Farm Environment Plans, and many farmers finding value in improving their understanding of the farm environment. Actions from these plans are expected to continue for many years.
- E350 has been life-changing for some of the farmers involved.
 While this impact is difficult to measure, it feels great to know that collectively, we have led such significant change in some farmers' lives.

There were also farmers who said they would most likely have left the
sector if it wasn't for the programme, which is a fantastic outcome.
 Such benefits are impossible to measure, but will be enduring and
rewarding for the region and sector, long past the projected life of the
programme.

The programme was designed on the premise of farmers learning from farmers, a model that had been successfully proven on the Candy farm, a regional on-farm extension model, and subsequent partner farms which further refined the delivery programme. Building on these models, we realised in the early stages of E350 that we needed to widen the focus beyond just increasing profitability to also include improved environmental sustainability and farmer wellbeing. These became our three planks and provided a solid framework for E350, with enough flexibility to evolve as we went, while still maintaining a strong foundation.

I am very proud to have been part of E350 over the last seven years. It has left our target farmers in a better space environmentally, personally and financially, and the programme benefits have also extended beyond mentor and associate farmers to the wider Northland region through indirect investment and knowledge dissemination. It's amazing how many farmers watch successful initiatives over the boundary fences and then seek to replicate these practices in part on their own farms. After all, that is what this project has been all about - "farmers learning from farmers".



Ken Hames
Extension 350 Chair

EXECUTIVE SUMMARY

Extension programmes are an effective way of supporting farmers to achieve a wide range of financial, environmental and wellbeing outcomes, using a farmer-led, farmer-focused approach. When well designed and effectively implemented, such extension programmes can collectively build resilience, strengthen relationships and ensure long-term sustainable success for rural communities. The E350 Programme is testament to this.

At the heart of Extension 350(E350) was a farmer-led and farmer-focused ethos, and the opportunity for **farmers to learn from farmers**, with a critical role being played by the mentor farmers, sharing knowledge and advice with target farmers. Such a model builds supportive, long-term relationships that foster trust and respect and encourage both practical and theoretical knowledge transfer. These are the outcomes that E350 has tested and proven over the last five and a half years, working alongside 384 Northland farmers, as evidenced in the outcomes and learning shared in this report.

E350 was born from the shared vision of a committed group of Northlanders wanting to improve outcomes on Northland pastoral farms. The three goals or 'planks' for the programme were increased financial profitability, improved environmental sustainability and improved farmer wellbeing. E350 was modelled on previous successful case study farms, a scientifically developed programme logic model and a favourable business case by Nimmo Bell, with the three planks reinforcing a triple bottom line approach.

E350 welcomed significant commitment from the wider rural sector in Northland and more specifically its key funders and stakeholders: Northland Regional Council, Ministry for Primary Industries, DairyNZ, Beef+Lamb New Zealand and Northland Inc, which held the contract on and carried overall responsibility for delivery, alongside a group of key farm consultants. A key outcome for the programme was a strengthened and more connected rural sector in Northland, with cross-agency collaboration, knowledge and resource-sharing and planning proving fundamental to the successes achieved on-farm. This sector support and connectivity proved invaluable as the programme navigated unexpected challenges, including COVID-19 and significant dry periods that hit Northland during 2019-2021.

Independent research evaluating the economic, environmental and wellbeing outcomes of E350 was completed by Scarlatti Limited (Scarlatti) between 2020-2022. This evaluation determined that for every dollar invested, a return of \$11.60 was generated against measurable financial outcomes alone. An investment of \$4.1m resulted in a return of \$48.6m, confirming E350 was a good investment as this represents just one of the three focus areas for the programme. The sustainable and long-term impact of E350 is still to be realised, with farmers describing the experience as 'life changing' and others confirming they would have left the industry without the support of E350.

Over five and a half years, E350 supported a total of 384 farmers, including 50 target farmers, 63 mentor farmers and 271 associate farmers, working in 10 clusters across Northland. Target farmers were central to the clusters and were supported by mentor farms and farm consultants, as well as receiving external knowledge and advice from stakeholders on areas such as business planning, environmental management and wellbeing. The programme supported focused learning and results on the target farms that could then be shared, like a ripple effect, out to associate farmers and the wider rural sector.

During evaluation of the programme, many of the farmers involved have described E350 as being the catalyst for significant change, including an improved environmental and financial sustainability on-farm, along with enhanced personal wellbeing. Adaptation of strategic planning has become a new practice for many target farms, as well as many farmers experiencing strong growth in their personal connections and wider networks across the rural sector. Across all these areas, behavioural changes have been identified by programme stakeholders and the farmers themselves, that are expected to lead to positive and enduring outcomes for the sector.

On reflection, E350 succeeded because it was a programme designed in Northland for Northland farmers and was supported by a committed number of individuals going 'above and beyond'. It focused on a triple bottom line, to ensure a sustainable approach to outcomes and placed value on the far-reaching gains of growing networks and connections between farmers. There was varied engagement across farmer groups but overall, farmers found the programme valuable and benefited from not just a financial focus but also from turning their focus to environmental and wellbeing outcomes, which was a new focus for many.

A flexible framework proved important to support an adaptive approach to the clusters and was enhanced by increasing engagement through farmer-led design and a more sustainable approach to connection and knowledge sharing. It is acknowledged that for E350 to have been successful for Māori farmers and incorporations, the programme

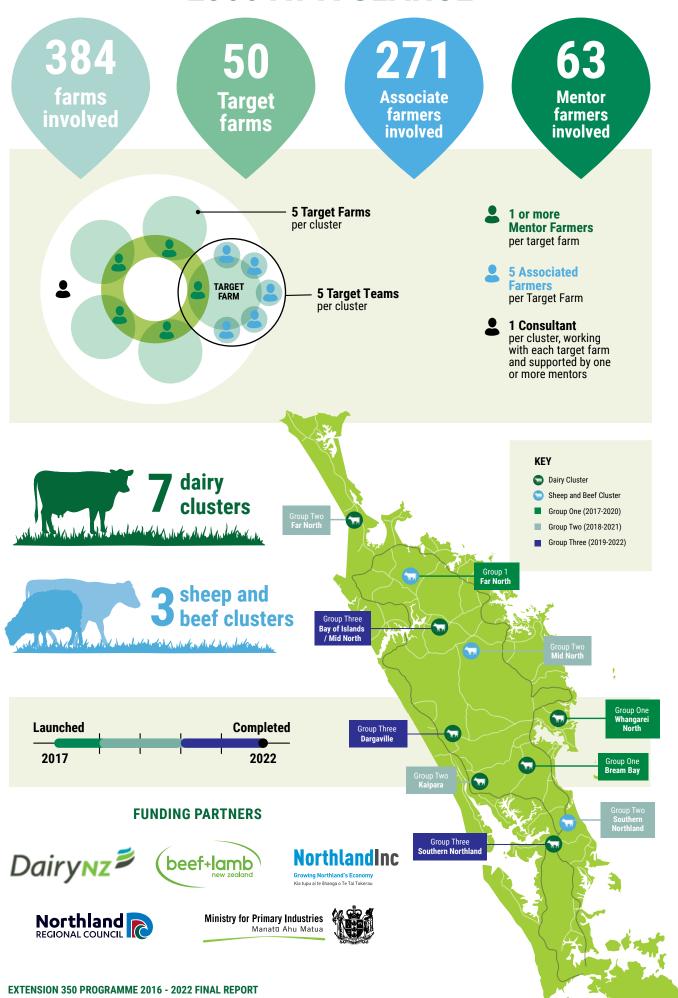
design and outcomes would need to be reframed from a Te Ao Māori perspective, with support and input from iwi and hāpu, and we encourage future projects to actively explore these opportunities. Additional resourcing from the outset of the programme would also allow for best practice evaluation and support baseline data collection, to provide clearer success measures for participants and future knowledge sharing.

This programme would not have been possible without the commitment and dedication of stakeholders, the steering group, project management team, farm consultants and most importantly the farmers themselves.



Luke Beehne
Extension 350 Project Lead

E350 AT A GLANCE



E350 was designed to support farmers in three key areas: increased profitability, improved environmental sustainability and improved farmer wellbeing. These were known as the three planks of the programme.

PROFITABILITY

775%

of farmers achieved their **best annual** profit with E350

161%

increase in annual strategic planning among farmers

99% of target farmers

attended Mark & Measure planning course

ENVIRONMENTAL



completion of Farm **Environment Plans** on target farms

100%

of farms reported some FEP progress actions achieved



completion of Whole **Farm Assessments** on target farms

WELLBEING

60%

improvement in farmers' social networks

55%

improvement in farmers' business networks

9 59%

increase in discussions about wellbeing in social circles





Doug Booth & Angus McCraith McCraith Farm Broadwood



"That's the biggest thing, the confidence [Extension 350 gave us]... It's not just confidence in our farming techniques either, it's confidence in our budgeting skills and everything that's going on behind it, from ground level up."

"I'm forever grateful... I actually achieved my ambition... And I would not have done it had I not had the outside help [from Extension 350]... I probably would have put the farm on the market [...if it wasn't for Extension 350]."

"It has given us the tools to look at environmental issues and fulfil a dream."

"I'm moving from doing day-to-day tasks that will earn me \$20 an hour, to bigger, longer-term decision-making that is worth so much.

It's been a huge learning curve."

"[Extension 350 has enabled me to make] the best of the **resources available** on my farm to achieve a more attractive venture for myself that will hopefully attract a good 50/50 sharemilker to enable my retirement. I would most definitely not be in this position if I had not joined Extension 350."

"Our view of environmental sustainability can partly be attributed to the networking opportunities we have been given through Extension 350, and from the fundamentals of Extension 350; recognising what we value and incorporating it into our business strategies and planning."

"Extension 350 has **normalised** wellbeing, we're not afraid to bring it up now".

"[A success has been] building on increasing awareness within both RP's (Rural Professionals) and farmers that environmental sustainability wasn't something that could be dismissed with completion of a FEP - which was the perception at the start of the project."

"We have become more focussed and passionate around business and farm performance and will continue to do so."

"Yes, Extension 350 has benefited me, I had no idea where to go before, it's got me thinking and asking the questions I need to get the answers and achieve the change I need. I have a vision for the farm and the future now."

E350 OUTCOMES & ACHIEVEMENTS

Extension 350 has been an incredible learning opportunity for Northland's rural community, with a wide range of benefits recognised across the 384 farmers through the farmer-led approach, and the focus on farmers learning from farmers.

Over the five and a half years of the programme, significant achievements were made by farmers across Northland, supported by strong commitment from mentor farmers and farm consultants, and meaningful cross-agency collaboration across Taitokerau Northland's rural sector.



From its inception in 2016, E350 was a significant undertaking, with its success relying heavily on the ongoing commitment of multiple agencies, organisations and individual farmers over the five and a half years of the programme. E350 was a unique opportunity to work collectively across Northland's rural sector and improve outcomes for the 384 farmers involved across three areas of focus, ensuring a triple bottom line approach. The three 'planks' for the programme were increased financial profitability, improved environmental sustainability and improved farmer wellbeing.

For Farmers

Many of the farmers involved have described Extension 350 as 'life changing' and a catalyst for improved environmental and financial sustainability on-farm, along with enhanced personal wellbeing. A focus on strategic planning was a highlight for many, who reported completing E350 with a much clearer plan for their future. Another highlight for participants were the strong personal connections that developed, not just between farmers but also amongst stakeholders and rural professionals across Northland.

Evaluation undertaken throughout the programme noted a substantial impact for many of the farms involved. Many farmers felt they received value from their involvement, and for some, the benefits to individuals and businesses were deemed considerable, with additional flow on benefits expected well into the future.

Positive outcomes were recorded across the three planks of the programme, including:

- Financial farmers achieved gains through operational benefits, such as improved pasture management, improved budgeting and financial management and enhanced reproductive performance, as well as strategic changes such as faster career progression, better succession planning and accelerated equity growth.
- Environmental farmers increased their understanding of improved environmental management and impending legislative requirements through creating Farm Environment Plans and taking action to align with these plans
- Wellbeing farmers improved their wellbeing as a result of the programme, with the normalisation of wellbeing discussions a particular success of E350.

Most farmers noted improvements in financial understanding and management.

Improvement in farm profits was a key measure for E350 and evaluation data shows financial gains were made by many farmers. These gains were achieved through both operational benefits, such as improved pasture management and enhanced reproductive performance, as well as strategic changes, such as faster career progression, better succession planning and accelerated equity growth.

Most farmers in the programme reported taking actions to improve their profitability, with the impact of their actions already evident on some farms before the end of the programme. For others, the benefits are yet to be fully realised. Many farmers noted that E350 increased their financial literacy and capability, which had enhanced their business performance and was supporting them to reach their goals. Because each farm was at a different stage in it's business growth and each farmer had different personal goals, the outcomes varied considerably. However, some examples of E350 farm results are shown below.

Dairy Farm A Smaller farm

Highly engaged, small farm size

Activities: Improved pasture management, genetics and reproduction, and overall management of farm costs.

Est. annual impact: \$100,000 - \$300,000.

Dairy Farm B Smaller farm

Low level of engagement, small farm size

Activities: Improved pasture conversion efficiency, in the use of supplement feed, and reproduction.

Est. annual impact: \$30,000 - \$100,000.

Sheep and Beef Farm A Larger farm

Highly engaged, large farm size

Activities: Improved policies and implemented a new grazing system.

Estimated annual impact: \$50,000 -\$100,000.

Sheep and Beef Farm B Larger farm

Low level of engagement, large farm size

Activities: Improved breeding stock replacements, their rotation lengths, and their bull enterprise.

Estimated annual impact: \$30,000 - \$100,000.

As part of the E350 evaluation, video testimonials have been captured with several farmers as a way to share lessons learned, for future programmes. They can be viewed at:

https://www.northlandnz.com/extension-350



"I had the advantage of (being) from a farm background and having done all the farm work but not a farmer per se. So I was really open to suggestions about trying different things... I wasn't set in any ways of 'this is how I've always done it, this is how I've got to keep doing it', so I had that open mind about doing things differently. So I looked at ways of increasing production on farm... pushing it a bit harder was the main thing we've done."

Dion Masters, beef breeding and finishing farm on 90 Mile Beach, Far North

"When times are tough and... Luke sent it out in the report that his wellbeing score was four, the E350 team would then look at the wellbeing first up, and it was a phone call straight away - what's going on, how can we help? That was incredible to have someone watching out for you and supporting you like that along the way" - Sunny

Luke and Sunny Oud, dairy farmers from Ruawai, Kaipara





"From where I started in E350, a struggling farmer trying to get everything done, I ended up with a sharemilker on the farm and a nice new shed. It's made it big enough for me to step back, and I think I'm lucky enough to retire, live on the farm and have it all happen around me... the wellbeing for me has come in my retirement."

Lachie Maclean, dairy farmer from Waipu, Whangārei District

As well as direct annual operational efficiencies, farmers recognised that their actions through the programme helped to position them better financially, both for the future and in the face of unforeseen challenges, such as COVID-19 and droughts.

Farmers described how E350 had increased their confidence and helped them either achieve, or put them on a path to achieve their goals. Some farmers also noted they likely would have left the industry if it wasn't for E350.

Stakeholders have noted that for some farmers the true benefit of E350 won't likely be fully realised until after the programme ends, due to the longer-term nature of some changes, based on farm system policy adaptation and improvements.

The below table demonstrates the improvement in profit outcomes for target farms surveyed at the completion of their three-year programme.

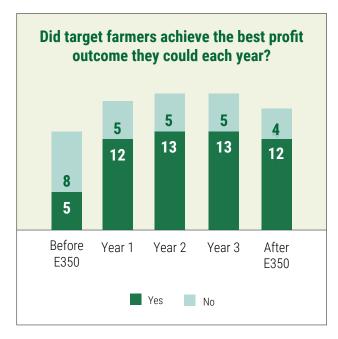


Figure 1: Target farm profitability (Farm exit discussion)

"Having a relationship with our banker now has been game changing as now the banker knows us and trusts us."

Most farmers improved environmental knowledge and practices.

All 50 target farmers completed a Farm Environment Plan (FEP), and for many it was the beginning of their environmental sustainability journey. These FEPs were supported by Northland Regional Council (NRC), Fonterra and in some cases Auckland Regional Council. Most farmers went on to take actionable steps toward their environmental plan during the programme.

Farmers noted an increase in their understanding and knowledge of improved environmental management and changing legislation. Farmers felt better equipped to deal with the uncertainty of future change and also better understood the impact their environmental changes could make, both today and in the future. Stakeholders noted a shift in attitudes towards environmental sustainability as a result of E350, with farmers being more open and willing to learn from other farmers on this matter.

In particular, farmers began to see this as an integral part of their long-term business planning as a result of the programme. Building connections with NRC and its Land Management Advisors was key for some farmers, as an important avenue for ongoing support and advice. With the support of NRC, some farms were able to continue, or begin, fencing and planting programmes throughout the programme.

Target farmers involved in farm exit discussions all noted the progress they had made towards their FEP actions during their time with E350. Most planned to continue taking actions beyond the formal programme (refer to Fig.2).

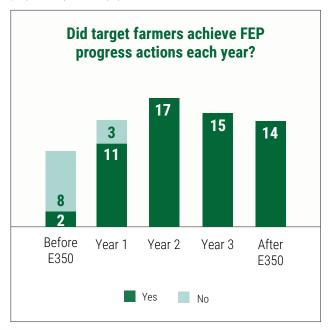


Figure 2: Target farm environmental sustainability (Farm exit discussion)

Most farmers saw an improvement in their wellbeing and became more comfortable talking about wellbeing.

Prior to E350, work was being undertaken nationally by Rural Support Trust, DairyNZ and others to work collectively to help improve farmer wellbeing. E350 continued this focus on wellbeing by working across the clusters to introduce a wellbeing score for farmers as part of their regular E350 reporting alongside other formal and informal initiatives.

Key wellbeing components across the programme

- 1. Kitchen table wellbeing scores and conversations
- **2.** Mark and Measure course (wellbeing component)
- 3. Wellbeing workshop
- **4.** Workshops with mentor famers
- **5.** Recognition dinners

Wellbeing brought to the (kitchen) table

Throughout E350 evaluations, most farmers acknowledged that wellbeing had not been something they had thought about or prioritised in the past (refer to Fig 3). During E350, target and mentor farms were exposed to discussions around wellbeing through a Wellbeing Workshop with representatives from DairyNZ's wellbeing team and the Rural Support Trust as well as a local general practitioner. In addition, mentor workshops were held, supported by counsellors, and regular 'kitchen table' meetings were held with farm consultants.

From Year One, two-thirds of farmers reported discussing wellbeing within their wider social circles and most farmers expect this will continue after the conclusion of the programme (refer to Fig 3). Farmers reported feeling more confident to discuss wellbeing with others as a result of E350.



Figure 3: Target farmer wellbeing discussions (Farm exit discussions)

"Going forward, I want to stay together with these people I've got relationships with, I want to bring other farmers up."

"We opened up our farm to other people – to consultants, bankers, fertiliser reps. We didn't let or ask these people onto our farm before... Extension 350 meant we had to open our doors."



Positive life changes on (and off) farm

Many farmers noted a wide range of changes they had made, both onand off-farm, as a result of their increased focus on wellbeing through E350. These included talking more openly about wellbeing with their staff, planning time off-farm, prioritising a better work-life balance and actively growing their connections and networks. Stronger connections and support networks led to farmers being able to seek help and advice from others more easily, growing their personal networks, connecting with rural professionals such as banks and NRC, and strengthening peer to peer learning opportunities (see Fig 4).

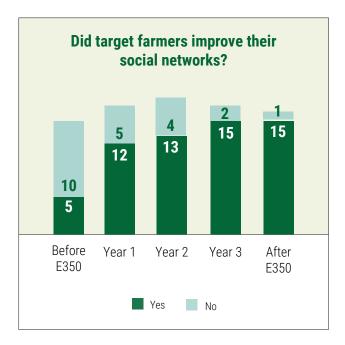


Figure 4: Target farmer social networks (Farm exit discussion)

["The highlight for me has been] developing the relationships with [Mentor farmers] - having conversations with like-minded people."

"It has been a genuine partnership. We all believed in what we were trying to do, and saw the value in it, and trusted each other. We didn't get it all right all the time, but the success in this was that we were able to learn when things didn't work, take the feedback... and keep improving."

"I have personally enjoyed the collaboration with other agencies and believe this is a common theme amongst the parties involved."

Improving performance across financial, environmental and wellbeing goals

A number of key outcomes recognised by farmers sit across all three planks of improved financial, environmental and wellbeing outcomes. One example is the opportunity farmers had to develop business planning skills and create a strategic plan for their farm and business. This was predominantly delivered through DairyNZ's Mark and Measure course and Planning Wheel tool, which were offered to all farmers at different times in the programme. Farm consultants further supported the ongoing refinement and execution of these strategic plans. This was a highlight for many of those farmers who attended, as it helped them to identify and align their business, family, and personal goals.

Prior to E350, very few target farmers had used a structured planning approach like a planning wheel or conducted a strategic plan or review of their business (refer to Fig 5) and on completion of E350, almost all target farmers had started to use their planning wheel and conducted a strategic plan/review. Many indicated they would continue to implement these plans into the future.

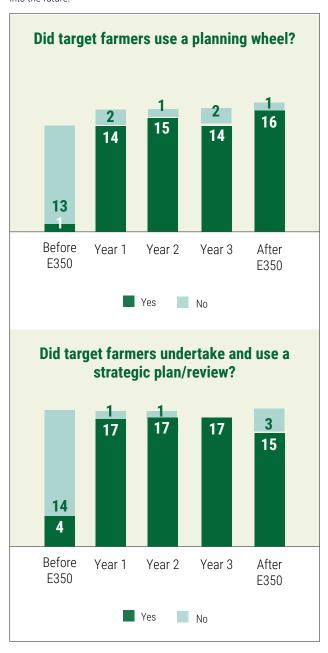


Figure 5: Target farms who had completed strategic activities (Farm exit discussions)

Growing resilience to better manage economic, social and environmental challenges

A common outcome expressed by many farmers in the programme was their increased resilience to better manage unforeseen and challenging situations. This strengthened resilience became the focus of research undertaken in partnership with DairyNZ and Lincoln University researchers at the conclusion of E350, with results defining five key processes farmers had undertaken to strengthen their resilience.

These five processes were:

- Buffering. Building up both natural capital (e.g. feed supplies) and social capital (e.g, access to valuable knowledge) to withstand major shocks or changes.
- **2. Enhancing networks.** Linking more strongly with people within the business network to access a range of perspectives (e.g. bank managers, regional council representatives and milk processors).
- Foresighting. Developing methods with mentors and farm advisors to investigate the impact of potential unforeseen changes (economic, environmental, personal) on the farm business.
- Learning from peers. Learning through interacting with other farmers or structured training courses.
- **5. System flexibility.** Having more diversity and flexibility in the farm system to cope with unforeseen large changes.

This research led to the development of the resilience wheel tool (see fig 6), which has now been made available for future programmes, for use in conjunction with the wellbeing score used in E350 to help others grow their resilience against the increasingly complex and accumulating economic, social, environmental and institutional shocks and stresses in the primary sector.

Excellent

Limited

Limited

THE

RESILIENCE

WHEEL

ABILUT

ROBINONS

Foresightings

Foresightings

Figure 6: The Resilience Wheel



Outcomes were variable amongst the 384 farmers involved

While many farmers made significant gains through their involvement with E350, there were others who made limited changes and felt they had received little benefit. Evaluation data shows the distribution of benefits was not equal across all programme participants, with target farmers receiving the most benefit from E350, followed by mentor farmers and then associate farmers. In many ways, the programme design facilitated this outcome.

Based on evidence gathered through surveys, interviews and consultant case studies, as part of the impact model development process, Scarlatti's evaluation reaches an assumption that approximately 90% of target farmers, 90% of mentor farmers and 40% of associate farmers were highly or moderately engaged with the programme and benefits received were roughly proportional to this (suggesting that the more a farmer put in, the more they got out). There were also farmers who had low engagement. This was estimated to be approximately 10% of target farmers, 10% of mentor farmers and 35% of associate farmers. An estimated 25% of associate farmers had very low engagement with the programme.

Recognising lower and more variable engagement than ideal from associate farmers during the programme, additional funding was sought to allow for more interaction and involvement with this group through additional workshops, on-farm meetings and education opportunities. While the additional funding for evaluation from Sustainable Food and Fibre Futures (SFFF) came part way through the programme, its impact was still significant. Despite associate farmers being the least engaged group overall, 61% felt E350 had made either a small or some difference to them or their farm (refer to fig 7) and 13% felt it had made a significant difference.

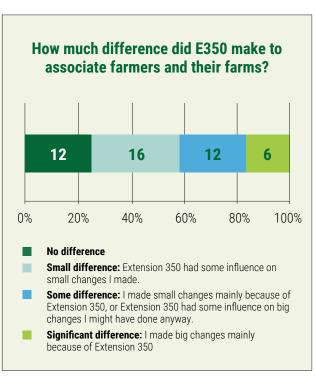
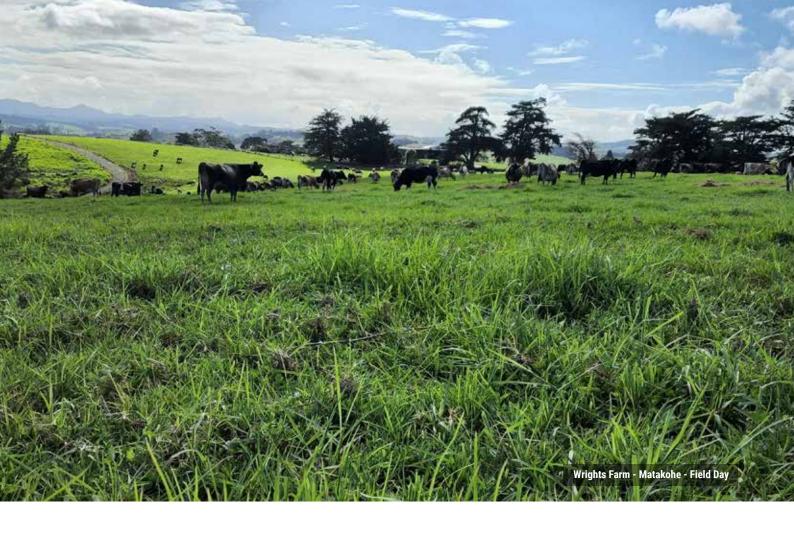


Figure 7: Associate farmers' perspectives on the difference Extension 350 made on their farm (Associate farmer survey, 2022) n=46



For the Sector

Alongside the achievements of individual farmers, the programme also achieved a number of notable outcomes that benefited the wider rural sector.

Programme evaluation highlights

In addition to the financial return, research highlights from the programme's final evaluation undertaken by Scarlatti¹ include:

- Improved farming businesses amongst those highly engaged farmers, through taking a more strategic approach to the business
- Strengthened farmer relationships, with other farmers and with rural professionals
- Engaged farmers who are looking for future opportunities to connect with others and contribute to the sector
- Connected funding partner organisations who have collaborated closely and collegially over the last seven years since project inception
- Experienced stakeholders who now have a suite of lessons learnt which can be applied to future activity and investments
- Expanded extension knowledge base (particularly related to resilience, behaviour change and the incorporation of a triple bottom line).

It is widely acknowledged that E350 'got off the ground' because of a dedicated and proactive group who had the relevant skill sets, strong personal networks and connections with multiple stakeholders to drive it forward.

¹ Summative Evaluation Report, Scarlatti (2022)

² Regional Economic Vitality Extension Initiative Business Case, 2016

Worthwhile investment, with continuing returns

E350 was designed to achieve outcomes in three key areas - reflecting the three planks of the programme - increase farm profitability, improve environmental sustainability and improve farmer wellbeing. However, because it was important a financial return could be achieved, to deem the programme a success, the business case was based solely on financial modelling as applying financial outcomes to wellbeing and environmental outcomes is difficult and complex.

A cost-benefit analysis undertaken as part of Scarlatti's programme evaluation determined that E350 was a good investment, from the **financial benefits alone.** Overall, the total financial benefit of E350 was modelled to be between \$7.60 and \$18.00 for every \$1 invested in the programme, with a midpoint of \$11.60, achieving a \$48.6m return. It is of note that the modelled benefit-to-cost ratio is of a similar magnitude to the business case developed by Nimmo Bell².

While not an explicit output of the impact model, a key observation during the cost-benefit analysis was that participating farms were realising financial impact beyond operational / production benefits. For example, many farms realised accelerated career progression and improvements in their equity position. While not an explicit output, the financial impacts of these benefits were estimated and included within the cost-benefit analysis. Another noteworthy outcome was the distribution of benefit, with evaluation data showing a small share of farmers realised a large share of these benefits, with approximately 50% of participating farms realising approximately 90% of the total financial benefits. The model was designed with heavy engagement for target farmers and the benefit distribution reflects this model. This understanding around the uneven distribution of benefits was not factored into the business case modelling.

"I have personally enjoyed the collaboration with other agencies and believe this is a common theme amongst the parties involved."

Strengthening industry collaboration

E350 delivered an excellent model for industry collaboration, with a key success measure being the extent of cross-agency collaboration between funders, stakeholders and rural professionals. Those surveyed noted that the collaboration within E350 had led to a strengthened trust within the partnership and stronger networks between organisations.

Additional outcomes were a greater understanding of what other agencies and organisations have to offer, as well as communication, resource sharing and knowledge sharing between organisations. Most stakeholders surveyed agreed that the extent of collaboration within E350 was greater than they had experienced before (see fig 8).

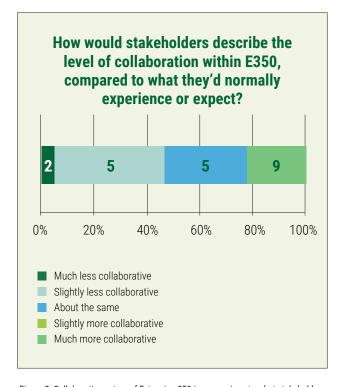


Figure 8: Collaborative nature of Extension 350 in comparison to what stakeholders would normally expect / experience (Stakeholder survey, 2022) n=21



By working more closely together, stakeholders acknowledged that their collaboration had led to better outcomes for Northland farmers (see fig 9) and improved collective understanding of the best ways to support Northland farmers.

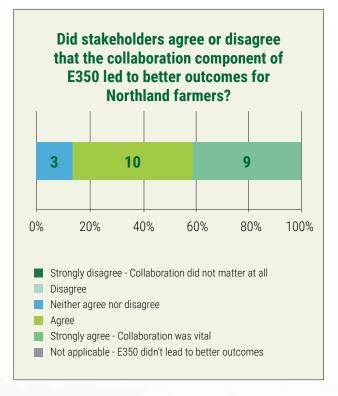


Figure 9: Extent to which stakeholders agreed or disagreed that the collaboration component led to better outcomes for Northland farmers (Stakeholder survey, 2022) n=22

This cross-agency coordination and collaboration translated into tangible outcomes for farmers, as tools were developed or shared between the sectors (such as DairyNZ's Mark and Measure programme and the Whole Farm Assessment), and E350 events allowed farmers to meet and learn from one another, such as public field days.

It was also noted that E350's internal teams (such as the steering group, evaluation group and consultant group) brought together different organisations, perspectives and areas of expertise, which added value to the programme and strengthened the professional capacity of the rural sector in Northland. The project team also noted that their positioning within Northland Inc brought an independent voice to the programme, as well as supporting E350 with access to additional resourcing, for example communications and HR support.

Prior to E350, elements of such an extension model had been trialled at a smaller scale, so the programme allowed for this farmer-led, 'farmers learning from farmers' model to be put to the test over the course of five and a half years, at scale with 384 farmers. Feedback from farmers provides extensive evidence that this model was effective, despite some results being affected by a number of external factors and constructive feedback on how the model could be evolved further³.

3 Summative Evaluation Report, Scarlatti (2022)



Building resilience through change

Throughout the five and a half years of the programme, both E350 farmers and the programme team were challenged by a number of external factors, such as, COVID-19, consecutive droughts and flooding. Other sector changes also created challenges for farmers, such as increased regulatory complexity and compliance, especially related to the environment, an increased focus on climate change and changing societal expectations. Through strengthened resilience, collaboration and determination, these were successfully navigated.

The team leading E350 evolved and adapted over the years, as the programme did, with the most significant change being a split of the steering group to better separate governance and operations during the programme, and the creation of an evaluation working group.

The evaluation working group helped facilitate, provide insights and support evaluation of the programme. Part of this process were the regular workshops for both management and the steering group, which facilitated honesty, trust and transparency amongst the group.

The evaluation programme as a whole also supported reflection, learning and the rapid application and integration of these learnings into the wider project. The steering group structure also helped ensure continuity of E350's strategic direction through significant disruption from external factors such as COVID-19, as well as strengthening relationships between agencies.

Despite the challenges faced, anecdotal industry feedback suggests farmers involved in E350 have been actively encouraging others to get involved if the programme is repeated because it provided such good growth opportunities for them and their business. A number of farmers who turned down the opportunity to be involved in E350 have since reported that, in hindsight, they wished they'd put their hand up to be involved - and would be quicker to do so next time.

Steps toward Māori engagement

When E350 first got underway, discussions were held with a number of collectively-owned Māori Trusts in the mid-north, and consideration of a Māori Cluster Pilot was discussed with the Te Tai Tokerau Māori Agricultural Forum delegation in 2017. Then in 2018, a Māori Engagement Plan was commissioned, in order to deepen the level of intentional Māori participation in E350 across all levels of the project. This plan was designed to build enduring relationships with Māori farmers and Māori farming entities, introduce a Māori perspective to E350 and increase Māori farm participation in E350. Key actions were to engage with private Māori farming entities, engage with collectively-owned Māori farming and build mutual E350-Māori knowledge, networks and perspectives.

Proposed engagement strategies included starting with kanohi ki te kanohi (face-to-face) hui between the E350 managers and iwi leaders, and also holding a Te Tai Tokerau Māori Farming hui. In November 2018, Te Whei Ao ki te Ao Marama was held on-farm in Kaikohe as an opportunity to bring together Te Tai Tokerau Māori farming stakeholders. The hui provided a platform for networking and the exchange of ideas, achieving the intended goals to connect Māori farmers, both with each other and with the wider rural sector.

While 71% of the 87 who attended found the hui very useful or highly useful, building on this success with meaningful next steps proved to be challenging. It was clear that additional funding was required to support the development of a Māori-led, Māori-focused programme and despite intensive efforts from the project team to secure this support, either within the existing project or alongside it, support and funding were unavailable at the time. Once COVID-19 hit in early 2020, engagement became even more challenging.



E350 LEARNINGS & REFLECTIONS

Evaluation across all areas of the Extension 350 programme has allowed for learnings and reflections to be captured through surveys, workshops and interviews with target farmers, mentor farmers, associate farmers, farm consultants, stakeholders and the wider sector.

This reflection has been a valuable process for all those involved in the programme, to acknowledge the significant gains made through E350 and to ensure any future extension programmes can learn from the learnings and experiences of E350.



Reflecting on the five and a half years of E350, there are many lessons to be learned and key insights to be drawn from what has been a highly successful programme. These reflections provide invaluable knowledge that can be applied to future extension programmes.

Regional Design for Regional Programme

E350 was designed by a committed group from the farming sector across Northland. The vision was always to create a regionally developed programme - built in Northland for the Northland region, and this was an important foundation for the programme.

E350 was designed to succeed in the Northland farming environment, with local farmers and local conditions in mind. Because of the local focus, the personal commitment and buy-in from all those involved was high and there was an innate sense of community ownership of the programme.

In addition, the fact that Northland Inc was able to deliver the programme independent of any individual farming sector entity or agency, as well as managing the contractual obligations with local and central government, ensured objectivity and support through the planning and delivery.

Importance of Triple Bottom Line

E350's 'three planks' were important to help farmers understand that a successful farm business balances financial and environmental sustainability, as well as farmer wellbeing. With access to DairyNZ's Mark and Measure course and planning wheel, as well as support from farm consultants, many farmers undertook strategic planning for the first time through E350 and were able to identify goals for themselves and their business, to measure success across financial, environmental and wellbeing outcomes.

Taking a more strategic approach proved invaluable in helping farmers develop longer-term strategies like succession planning and also helped them build resilience when it came to managing external factors, such as political, social and environmental pressures. This holistic thinking reinforced the interconnectivity between financial and environmental outcomes as well as farmer wellbeing, which ensured that all three goals were prioritised, rather than the focus just being on financial outcomes.

Far-reaching Gains Through Networks and Connection

A common reflection for all E350 farmers and stakeholders was the value that came from growing their personal networks and building relationships across the rural sector, including with banks, vets, NRC and other rural professionals. These expanded networks ensured farmers could more easily seek advice and support, leading to improved farmer wellbeing, better on-farm decision-making and greater opportunities for learning and development. For stakeholders, it improved knowledge and understanding across agencies and created opportunities for future collaboration and resource-sharing.

The cluster model provided a successful catalyst for the growth of farmer relationships and networks, with a particular highlight for many being the relationships that formed between target and mentor farmers. On reflection, more opportunities for farmers to grow their networks and receive mentorship could have been created within the programme, in particular for associate farmers, which would have led to stronger long-term relationships, wider distribution of benefits, and a more connected rural sector.

Engagement Across Farmer Groups

Reflecting the programme model, target and mentor farmers had relatively high engagement in the programme, associate farmers reported more variable levels of engagement. This is reflected in the perceived value they placed on the programme, as well as the outcomes they achieved through their involvement in E350.

The reasons for differing levels of engagement were multi-faceted and there was no one single factor that affected all farmers. Instead, a range of factors were evident, including personal, farm, external influences (e.g. consecutive droughts, COVID-19) and the structure and processes of the E350 programme. The programme identified early on a direct correlation between engagement and outcomes, meaning that in general, the more involved and engaged a farmer was, the more likely they were to achieve outcomes. Compounding this, once a farmer was negatively affected by having no face-to-face engagement due to COVID-19, it was easier for them to disconnect, and then much harder to re-engage. Additional funding was sought in 2019 and secured in late 2020 which went part way towards addressing low associate farmer engagement, however strengthening opportunities for connection and engagement would be strongly encouraged in future programmes.

During evaluation, a number of farmers expressed gratitude that they had accepted the opportunity to be part of the programme, because of the positive impact E350 had had on their lives. Similarly, industry feedback has reported anecdotal evidence that some farmers are regretful they turned down the opportunity to be part of E350. This suggests that if the programme was repeated, the initial buy-in and engagement would be higher from the outset.

Recruitment a Factor for Success

Some stakeholders felt that low farmer engagement – particularly those affected by personal and farm characteristics – could have been mitigated through identifying these farmers during the programme recruitment. Conversely, a tighter recruitment approach might have resulted in missed opportunities for change, particularly amongst those at the beginning of their change journey or those who were unexpected adopters. Some of the greatest outcomes were sometimes unexpected, with farmers achieving far beyond what would have been identified in pre-engagement analysis. This again demonstrates the challenges in predicting human behavioural change.

Over time the project adapted its recruitment process to reflect learnings and feedback. This process remained flexible but became more refined as the programme went on. In the final year, there was a call for expressions of interest from target and mentor farms. Potential mentors were shortlisted and then approached to gauge interest, understanding and enthusiasm. Target farms were then considered and shortlisted, with the support of mentors and stakeholders, before being approached. If there was interest, the opportunity and expectations were worked through, with the support of a farm consultant, before an MOU was signed.

On reflection, a staged approach to programme recruitment could be considered, opening up learning and upskilling opportunities to a wide range of farmers at a preliminary stage (for example, through the Mark and Measure programme) and from there, developing criteria to proceed with a selection of farmers based on performance and engagement.

Increased Focus on Environmental Sustainability

Feedback from farmers was inherently positive when it came to the increased focus on environmental sustainability. At the time of E350 starting, Farm Environment Plans (FEPs) were a relatively new concept and so for some farmers, this was not something they had previously considered on their farm.

Most found completing a Farm Environment Plan a positive experience, with some farmers suggesting the Plan be completed earlier on in the programme so any actions could be more easily factored into future farm planning. It was noted that planning and early adaptation of FEPs helped to set farms up really well for both uncertainty from environmental factors and impending legislative changes in this space.

The opportunity to engage with experts in this area, such as NRC's land management advisors, was seen as highly valuable. Beyond E350, this demonstrates there is a strong opportunity for supporting more farmers to better understand their farm environment through the development of FEPs and industry education.

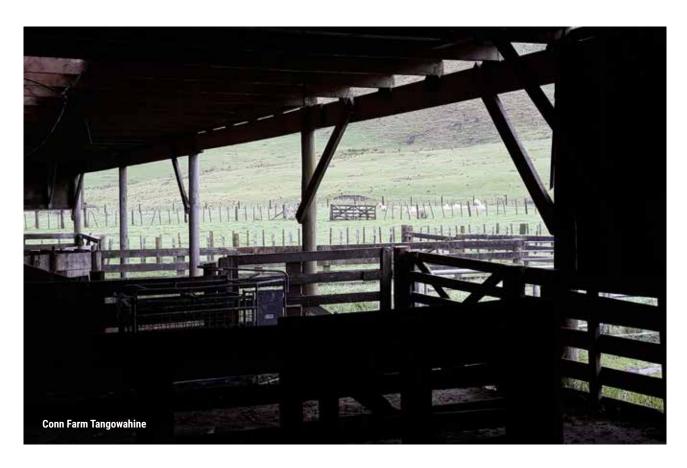
Spotlight on Wellbeing Valued and Encouraged

While the E350 programme was among the first extension programmes in New Zealand to formally include farmer wellbeing as one of its core objectives, this has since become more commonplace. Reflecting on their own wellbeing was a new practice for many E350 farmers and the wellbeing score that was developed in the early stages of the programme gave them an easy tool to measure and share how they were feeling. The key objective of the 1-10 score was to create a platform to talk about wellbeing and a starting point for kitchen table conversations. This increased the focus on wellbeing and gave farmers the opportunity to discuss their wellbeing and talk through any issues they were facing.

Many farmers were keen to adapt and continue this focus on wellbeing for themselves, their families and their staff beyond the programme. The wellbeing score would be a valuable tool to apply to any future programmes as a simple, yet effective measure of farmer wellbeing. This spotlight on wellbeing has also created a ripple effect in the wider rural sector, by improving the capability of other rural professionals to participate in wellbeing conversations.

Related to wellbeing, it was noted by some farmers that the programme itself - and the changes required - created additional stress and frustration at times. This reflects the importance of having clear roles and responsibilities for all those involved in the programme to ensure ongoing accountability.





Successful Organisational and Cross-sector Collaboration

One of the key success factors of the programme was the collaboration around project delivery between funders and wider stakeholder organisations, noted as a highlight among stakeholders. Overall, E350 represented an excellent model for collaboration across the rural sector, with funder organisations contributing both funding and in-kind time and several wider stakeholder organisations also contributing in-kind time throughout the programme.

In addition to funding, the key partner organisations supported the programme in a myriad of ways, giving farmers access to tools and resources and providing expert advice and support across the programme. There is no doubt the extent of this collaboration added immense value to the outcomes for those farmers involved.

E350 stakeholders also acknowledged that this type of collaboration does come with challenges. For example, structures needed to be in place so that changes in staffing within partner organisations didn't negatively impact the programme through loss of knowledge or continuity. Additional challenges were faced in trying to meet the needs of all parties involved and ensuring the right people were involved in the right aspects of the programme.

On reflection, most stakeholders felt their involvement was 'about right', but a small number would have liked to have been more involved. These stakeholders typically sat outside the core target farm team (target farmer, mentor farmer and consultant) such as council and industry body representatives. Supporting more involvement from these stakeholders would ultimately support stronger networks across the programme and the sector.

Committed Individuals Going 'Above and Beyond'

Vital to the success of E350 was the dedication and commitment of skilled and passionate people across all facets of the programme, including consultants, the project team, extension teams (from DairyNZ, NRC, Beef+Lamb NZ and Fonterra) and the farmers. On reflection, many of these stakeholders went 'above and beyond' what they were contracted or expected to deliver to help maintain and sustain the programme through numerous challenges, including COVID-19, regional droughts and staff turnover. This was seen most evidently with consultants going above and beyond their contractual obligations. This personal commitment was a key factor in the programme's success and suggests that more funding for the overall programme and a focus on increasing capacity and capability in the sector could have alleviated the pressure felt by some key individuals.



A Sustainable Approach to Connection and Knowledge Sharing

One of the key reflections from stakeholders is considering how E350's design could have been more sustainable, to avoid losing momentum among participants on completion of the programme. One possibility would be a more enduring, self-sustaining funding model, to support ongoing connectivity and knowledge sharing among E350 farmers, with the intention of continually expanding the programme's reach. By making some of the E350 tools readily available beyond the programme, farmers could also be supported to initiate self-led learning and change.

The programme highlighted the opportunity to grow professional capacity and capability in the rural sector, by investing in upskilling more farm consultants, land management advisors and mentor farmers so skills and knowledge could continue to be passed on beyond the programme.

Developing a Flexible Cluster Framework

From the outset, the cluster model was designed to provide a flexible framework that could be adapted by individual groups to suit their unique needs and circumstances. This adaptability proved to be a strength, in that consultants and farmers were able to adapt the model to best fit their needs. However, this also created challenges as it allowed for variability of experiences across the programme, with not all farmers experiencing the same level of engagement or outcomes. Many E350 farmers and stakeholders would recommend the cluster model but with some changes, relating largely to increased activities and engagement for associate farmers.

Increasing Engagement Through Farmer-led Design

Evaluation of E350 suggests a 'top down, bottom up' approach to the programme design helped to ensure the programme remained both farmer-centred and focused on their needs and drivers, while also ensuring the needs of funding partners were met. The expected outcome of this approach would be an increase in farmer engagement and a wider impact of the programme on other industry strategies.

During the programme design phase, identifying how change, or outcomes, would be created for different farmer groups would also help to maximise the ripple effects of change. Within E350, this would have meant more intentionally including identified outcomes for associate farmers (those who received the lightest touch in the programme) and then designing the programme outwards from there.

Flexible Approach for Long-term Adaptation

With such a large-scale, long-term programme, it was important to take a flexible approach to allow the programme to evolve, learn, develop and adapt over time. A structured review cycle and flexibility within the E350 work plan allowed for an adaptable approach where changes could be made as necessary. E350's planning processes included regular 'lessons learnt' sessions across the project with the steering, operations, evaluation and consultant groups, along with regular discussions within the project team.

These workshops helped the programme to identify areas for change and improvement, along with recognising areas that were working well. This approach also led to a change in E350's governance structure over the course of the programme, with a separation into a steering group (responsible for the strategic direction of the programme) and an operations group (providing guidance and support for the programme activity). The project team expanded during the course of project and an evaluation working group was also created

COVID-19 presented as one of the significant external challenges faced by the sector and region and is a good example of the need for a flexible approach. COVID-19 disrupted on-farm programme delivery and engagement, which required the project to adapt and find new ways of connecting with farmers, such as online meetings and using videos as education and information-sharing tools. Flexibility was also created around timing of the programme delivery.

Best Practice Evaluation and Baseline Data Collection

Evaluation frameworks and activities are vital to support effective decision making at all stages of a programme, from informing programme design, supporting programme execution and monitoring impact and outcomes. While E350 initially relied on a high level of in-kind support from stakeholders for evaluation, it was soon realised that more dedicated resourcing for in-depth evaluation would be necessary to achieve best practice programme evaluation.

The experience from E350 confirmed that initial evaluation activities in the programme planning stages should include:

- 1. Establish funding for evaluation and baseline data capture
- 2. Evaluation team established early on
- 3. Evaluation embedded in activity
- 4. Identification of key measures
- **5.** Collection of baseline data
- **6.** Determination of how impact will be calculated across all key programme areas.

Such data would support programme learnings to extend well beyond the programme itself, providing knowledge sharing and outcomes for the wider sector as well. As an example, several research papers have been undertaken by DairyNZ and Lincoln University, using data captured during E350 and looking at themes such as the value of the extension model and resilience among farmers.

Farmers are a key source of data for such a programme and an important reflection would be to develop data gathering methods that did not create an additional burden for the farmers themselves.

Understanding what data would be available and how it could be captured needs to be carefully considered. For example, E350 envisaged it would be able to measure pasture harvested but this was affected by environmental influences, including three consecutive droughts. At the same time, financial accounts when compared to industry results proved challenging because a high number of variables - particularly across dairy and sheep and beef - led to mixed results.

E350 and its participants may have benefited from clearer measures of success across all three planks in the planning stages, to better achieve balance and prioritise resourcing. Having clearer, more measurable goals would help ensure stakeholder expectations were met, particularly in relation to how resources, timelines and sequencing were allocated.

Engagement with Māori Farmers and Landowners

While E350's objectives included meaningful engagement with Māori farmers and incorporations, this was not fully achieved through E350, despite a genuine commitment from the project team. It is acknowledged that for E350 to have been successful for Māori farmers and incorporations, the programme design and outcomes would need to be reconsidered - and reframed - from a Te Ao Māori perspective, with support and input from iwi and hāpu.

Despite the challenges faced during the programme, it was felt that Māori representation within the programme was broadly reflective of the sector. On reflection, a fully independent Māori-led, Māori-designed programme would be necessary to enable Māori farmers to be fully engaged in such a programme in the future.

HOW E350 CAME ABOUT

Extension 350 started taking shape in 2016, with a small group of committed rural professionals discussing how they could support Northland farmers to achieve improvements on their farms. Over time, the programme evolved around the three 'planks' of increased financial profitability, improved environmental sustainability and improved farmer wellbeing.

The design of the programme followed previously successful focus farm projects and focused on a farmer-led model that saw farmers learning from farmers.



The concept for the E350 Programme (E350) emerged from discussions in 2016 with a small group of Northland stakeholders, including DairyNZ, farm consultants and farmers, who had the shared goal to increase the profitability of local farmers.

At the time, Northland pastoral production (across dairy, sheep and beef farms) was lagging behind national averages⁴, despite a higher proportion of people employed in the sector⁵ and there was a degree of motivation across the sector to make positive change. The 2015 Tai Tokerau Northland Growth Study Opportunities Report⁶ noted that Northland accounted for only 2.6% of New Zealand's GDP despite being home to 3.6% of the population. It also highlighted the substantial contribution made by the pastoral sector to the Northland economy and the opportunity to strengthen the wider Northland economy through the farming sector.

As noted by the Ministers of Economic Development, Primary Industries and Māori Development in their foreword to the Growth Study:

"Any initiative which moves performance and profitability of Northland pastoral farmers closer to that of such farmers in other regions has the potential to make a serious impact.... Strategically, the pastoral sector is both important and relevant to improving the wellbeing of people in the Tai Tokerau. It also has the scale and potential to make a significant impact to the Northland economy."

As discussions between industry and farmers progressed, environmental sustainability and farmer wellbeing were also identified as key goals for the programme. The group sought to leverage, and learn from, past agriextension successes, such as the use of the cluster delivery model at Far North and Lower North Partner Farms as well as the Northland Focus Farm.

Key members of the formative group were Dave Gray, Gareth Baynham, Chris Neill, Kim Robinson, which then expanded to engage the wider pastoral sector, including Beef+Lamb New Zealand, and aligning with the Tai Tokerau Northland Economic Action Plan⁷. With support and resourcing from Northland Inc and the support of the Northland Agricultural Forum, a business case was developed by Nimmo Bell⁸ (2016).

The business case provided a strong recommendation to proceed, based on the success of previous pilots, the strong industry-wide support for the programme, a willingness and commitment being demonstrated by leading farmers to provide mentoring, the extent of prior assessment and plans for each farm and farmer, and the establishment of planned governance and project management.

The business case described the initiative as being: "compelling, is well thought through and has the potential for a significant positive economic impact in Northland". While the planning group aimed to increase profitability, improve environmental sustainability and improve farmer wellbeing, the business case focused just on the programme's financial viability and impact.

It was determined that implementing the initiative would require a total investment of \$3.45° million, with the direct on-farm net benefits, in terms of increased profit, estimated at \$105.7 million in nominal terms. After deduction of project costs, the overall net benefit was expected to be \$102.2 million, with a Net Benefit to Cost ratio of 15:11°.

Based on the business case, the team were able to pool regional resources and then leverage this for a collective proposal to central government support. Funding was secured from the Ministry for Primary Industries (MPI), Northland Regional Council, DairyNZ and Beef+Lamb New Zealand and Northland Inc, who also provided vital support as contract holders and independent project managers to bring E350 to life. MPI showed a genuine willingness to think differently in its approach to the programme, which led to an innovative approach to the design and structure of the contract.

E350 was designed to support a range of dairy, sheep and beef farms from across Taitokerau Northland with an emphasis on working with middle-tier farms. This would allow for the greatest opportunity for improvements in financial performance, environmental sustainability and farmer wellbeing.

Once funding and partnerships were cemented, the project team undertook a series of workshops to refine the programme logic, as well as programme goals, to ensure they would meet the needs and expectations of all those involved. While there has been some evolution in the wording of these goals over the course of the programme, funding partners agreed that the spirit of these original intentions did not waiver (stakeholder interviews, 2022)¹¹.

These goals reinforced critical success factors as outlined in the business case, namely:

- farmers learning from farmers, one-on-one mentoring and the introduction of positive peer pressure between farmers to support changes in behaviour
- a willingness from farmers to work in new ways to improve their farm systems and utilise new opportunities (tools, training etc) provided through the programme
- effective cross-agency collaboration, with a 'learn as we go' approach, to grow knowledge and understanding across the sector
- proactively strengthening relationships and networks to build professional capability and capacity in Northland's farming sector.

⁴ Regional Economic Vitality Extension Initiative Business Case, 2016

⁵ Extension 350 Programme Summative Evaluation Report, 2022

⁶ Tai Tokerau Northland Growth Study Opportunities Report, 2015

⁷ Tai Tokerau Northland Economic Action Plan, 2015

⁸ Regional Economic Vitality Extension Initiative Business Case, 2016

⁶ The final investment of the programme was \$4.19m

¹⁰ Regional Economic Vitality Extension Initiative Business Case, 2016

¹ Extension 350 Programme Summative Evaluation Report, 2022

DESIGNING THE E350 PROGRAMME

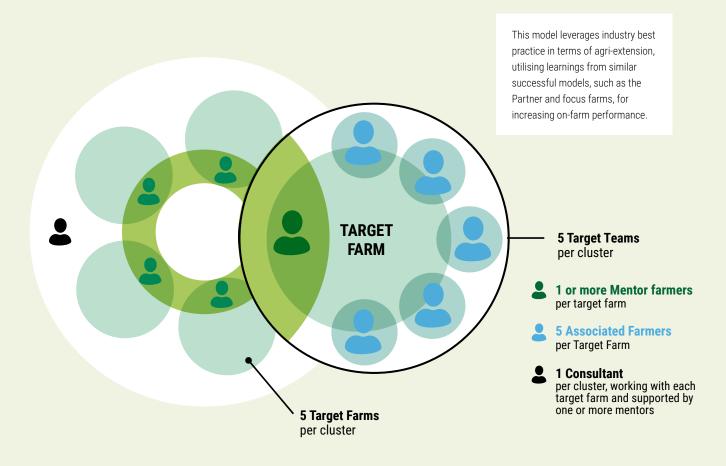
The Extension 350 concept was designed in 2016 by farmers and industry stakeholders in Taitokerau Northland, for Northland pastoral farmers. The programme was built around a 'triple bottom line' approach to achieving farm outcomes, referred to as the three 'planks' of the programme. Through E350, farmers would be supported to increase farm profitability, improve environmental sustainability and improve farmer wellbeing.

To achieve this, E350 utilised a cluster model with small group farmer-to-farmer interaction, emphasising farmer-led learning and focusing on individual farmer outcomes. The programme was designed to directly reach 350 farmers at varying levels of influence (to be known as target, mentor and associate farmers), through the establishment of 10 clusters across Northland, over the five-year life of the project. A key strategy for success involved identifying and recruiting 'target' farmers who were considered able and willing to change and were thought to be predominantly mid-tier performers' (i.e. those that sit in the 35-65% cohort) and supporting them towards average-efficient or upper quartile performance within the sector.

Cluster Model

The cluster delivery model used in E350 recognised that farming relationships are complex and interrelated and that good practice extension requires the development of long-term relationships between agri-extension professionals, farmers and other rural professionals.

The triangular relationship model (as shown below) saw advice and direction being given to the 'target' farmer by a farm consultant, with this relationship supported - and action encouraged - by one or more 'mentor' farmers. The direction given aimed to achieve on-farm change based upon the target farmer's own aspirations and goals and in line with the 'three planks'. The one-on-one relationship between the target and mentor farmers was considered a crucial ingredient for success, with evidence suggesting that farmer-driven advice is more readily accepted by farmers than that from rural professionals. The model then relied on a ripple effect, with the positive on-farm changes by each target farmer being shared to a surrounding group of 'associate' farmers who would then be influenced to make positive changes on their own farms, further spreading the benefits throughout the sector.



The roles and responsibilities of the participant farmers were as follows:

- Target farms received one-on-one advice and support from a
 farm consultant and mentor farmer, in line with their Whole Farm
 Assessments (delivered through E350). They contributed \$6,000 to
 participate in E350 and were expected to share their journey with a
 group of associate farmers. Target farms included both dairy and
 sheep and beef farms.
- Mentor farmers worked with the consultant to provide the target farm with advice and support. Mentor farmers were expected to learn from the process, which would then lead to improvements on their own farm.
- Associate farmers were involved as observers, monitoring progress
 and change on the target farms and then adapting these learnings
 to their own farm. It was intended that E350 would also help them
 to build and strengthen their networks, from which they could draw
 support and learn.
- Farm consultants provided consultancy advice and support to the
 target farms, focused on achieving the farm's goals. The consultants'
 responsibilities included contribution to recruitment, leading the
 Whole Farm Assessment, supporting project management, driving
 communication links within the cluster and with stakeholders,
 supporting the industry body extension teams with events and
 reporting on farm progress.





Triple Bottom Line Approach

E350 was designed to roll out over 5 and a half years in Northland, to create a stronger, more active and resilient pastoral sector in Northland by raising the on-farm performance and productivity of E350 farmers. The project design recognised that for farming businesses to be truly successful and resilient, there needed to be a focus on a 'triple bottom line', moving away from the traditional focus on purely financial outcomes such as increased profitability, and giving equal importance to environmental sustainability and improved farmer wellbeing.

The programme set out to measure profitability against factors such as trend levels of pasture harvested, industry-specific production measures (e.g. kg milk solids/ha, net product/ha, in-calf rates), baseline versus annual financials and also financial comparisons to regional sector trends. Improved environmental sustainability was to be measured by the number of target farms completing a Farm Environment Plan (FEP), actions taken against the FEP and compliance with relevant regional plans and/or resource consents.

Improved farmer wellbeing was to build on current programmes already underway in the industry by DairyNZ and the Rural Support Trust and would be measured using a number of factors. These included farmers' participation in the programme, such as attendance at cluster events and E350 field days and feedback provided from farmers throughout the programme. Wellbeing would also be recorded through a 'wellbeing score', as part of the regular interaction between target and mentor farmers and farm consultants.

Building resilience and strategic planning skills were also a key focus in the design, in acknowledgement of the changing economic, political, environmental and social pressures outside a farmer's control and the uncertainty this causes, as well as the importance for farmers to be able to successfully navigate these often challenging external factors. It was considered vital that E350 gave farmers the ability to withstand, and react positively to, such volatility. Collectively, the goals of E350 were designed to give farmers the skills to build resilience and take a more strategic approach to their business, to make decisions that would support their individual longer-term goals such as on-farm improvements, debt repayment, managing succession and improving their livelihood.



Above: E350 Mentors Garth Preston and Peter Flood

Key Stakeholders

A key success factor for E350 was the involvement and collaboration of key industry partners, including DairyNZ, Ministry of Primary Industries, Northland Regional Council, Beef+Lamb New Zealand and Northland Inc. These industry stakeholders provided programme funding, as well as inkind support to all the farmers involved through access to a wide range of tools, resources, support with strategic planning and knowledge sharing.

Other key stakeholders were identified, including - most importantly - the target, mentor and associate farmers, farm consultants, Northland Agricultural Forum, iwi/hāpu, Fonterra, Auckland Council and Northland farming communities not directly involved in the project. Connection was made with environmental organisations such as Kaipara Moana Remediation, and rural entities such as Rural Support Trust, FarmStrong, Sustainable Food and Fibre Futures, Scarlatti and Ag Research. In-kind contributions also came from organisations across the rural sector, such as FMG and PGG Wrightsons and other contributors.



Proposed Funding Model

Funding options were explored in the business case, and the proposed model outlined an initial budget of $\$3.45\text{m}^{12}$ to deliver the full programme. The business case noted, 'The returns demonstrated in the Economic case show that it is a very good deal'. Under the expected level of on-farm profit increase and project benefits extrapolated 15 years from the end of the development period, the project was expected to return a net benefit/cost ratio of 15:1

The business case suggested a shared approach to funding, with key contributions from Northland Regional Council (through the Investment and Growth Reserve) and DairyNZ, contributions from the target farmers themselves, as well as Beef+Lamb New Zealand, and the remainder be sought from central government through the Ministry for Primary Industries. The business case¹³ noted the initiative fit the central government's objective to 'stimulate economic growth and employment' in high priority regions, including Northland.

Māori Landowners

E350 was seen as an opportunity to align with He Tangata, He Whenua, He Oranga, the Tai Tokerau Māori Economic Growth Strategy by deepening the level of intentional Māori participation across all levels of the programme¹⁴. Increased participation and engagement of Māori farmers and incorporations was anticipated through Māori farmers participating in E350 as well as attending project discussion groups and field days.

The business case also noted that, 'Broad-based Māori participation is a priority on the basis that for Northland to succeed Māori need to succeed. Māori farmers and Māori incorporations will be encouraged to participate either within a cluster or form a separate Māori cluster as is their want. Advice is being sought from Māori business leaders on how to facilitate this process.' The E350 project was tasked with seeking advice and support to develop an approach for the engagement of Māori farmers and landowners.

Governance Structure

To ensure clear strategic direction for the programme, a steering group was considered necessary, with representatives from DairyNZ, Ministry of Primary Industries, Northland Regional Council, Northland Inc, Beef+Lamb New Zealand and an independent chairperson. As advised by the Business Case¹⁵, the Chair was recognised as a successful high profile Northland farmer. The steering group had a key leadership role to ensure the success of the programme.

Northland Inc held contractual responsibilities for E350 and, with input from the steering group, appointed the management team and supported them accordingly. The management team was responsible for ongoing operational delivery along with appointing farm consultants, target farmers, mentor farmers and associate farmers.

Evaluation Methods

In the planning stages, resourcing for evaluation work was to be sourced through in-kind contributions, and supported by AgResearch Ltd. The E350 team developed an evaluation framework and logic model early in the programme and focused on data collection, including farmer surveys, reports from consultants and insights from reflective workshops with support from AgResearch Ltd. In 2020, E350 sought, and received, Sustainable Food and Fibre Futures (SFFF) funding, a proportion of which was allocated towards additional evaluation and data collection to support best practice learnings and applicability. With this funding, Scarlatti was employed to develop a more extensive evaluation model and approach.

¹² The final programme budget was \$4.19m

¹³ Regional Economic Vitality Extension Initiative Business Case, 2016

¹⁴ Extension 350 (E350) Annual Report 2017

¹⁵ Regional Economic Vitality Extension Initiative Business Case, 2016



Establishment

Following the completion of the Business Case, the E350 steering group and independent chair were appointed, with Northland Inc undertaking the contractual agreements for delivery. With key funding support in place by mid-2016, work began in earnest to introduce the programme to Northland's farming community and raise awareness about the objectives and goals of E350. Communication and engagement plans were developed, and conversations undertaken with farmers across Northland through a range of channels, including stakeholder relationships, to identify and recruit target, mentor and associate farmers, as well as appoint farm consultants.

Year	Number of Clusters		Total Clusters				Farmers Directly Engaged
	Beef and Sheep	Dairy		Target Farms	Mentor Farms	Associate Farms	
2017/18	1	2	3	15	17	91	123
2018/19	2	2	4	20	28	95	143
2019/20	0	3	3	15	18	85	118
				50	63	271	384

Clusters were identified across Northland, providing a geographic spread and a balance of dairy and sheep and beef farms. Predominantly, mid-tier farms were targeted, as the farms with the highest opportunity for growth. Farmers were asked to complete expressions of interest and workshops were held for those farmers selected, with connections then made between consultants, target farmers, mentor farmers and associate farmers.

Rollout

The programme was rolled out in three stages, with three clusters and 15 target farms in 2017/18, four clusters and 20 target farms in 2018/19 and a further three clusters and 15 farms in 2019/20.

As planned, the groups were rolled out every year for three years. In 2021, Northland experienced its third successive significant dry period, which challenged farming systems, as well as farmer resilience and wellbeing, with the added pressures of COVID-19 lockdowns and a heightened market and supply chain uncertainty. It also affected farm profitability due to lower milk production and lower stock weights, alongside increased supplementary feed expenses. Despite the challenges, all three groups were delivered within the five and a half year programme duration. Environmental activity was also slowed due to timing and planting survivability.

Clusters in Action

Target farms were at the heart of the programme delivery and required the greatest time commitment of all farmers in the programme. As well as developing a Whole Farm Assessment with their farm consultant, they also agreed to undertake a three-year business development strategy and plan for their business and a Farm Environment Plan. This time commitment also allowed for regular communications and engagement with both mentor and associate farmers, as they improved operational & management practices and then shared their learnings.

The farm consultant played a key role in driving and coordinating these activities for the target farmer and providing consistent support, guidance and advice as plans were developed and then implemented. Farm consultants were also a key conduit between the project manager, target and mentor farmers and participating industry organisations, as well as facilitating cluster activity. They showed incredible commitment to the programme, going above and beyond their contracted requirements to support the success of farmers.

Sitting around each cluster were key stakeholders, including DairyNZ, Beef+Lamb New Zealand and Northland Regional Council, who supported the clusters with advice and expertise, events, tools and resourcing. Additionally, farm consultants and target farmers were encouraged to engage with other rural professionals and entities who were connected to their business, such as their bank, accountant, vet and local council.

In the design phase it was acknowledged that the cluster model needed to be flexible, so individual farmers could adapt the delivery structure within the cluster model to make it work for them. The model accommodated different requirements, and this was evident with how often some clusters met and the format of these meetings, the degree of formality within the structure of each cluster group, and the role and number of associate farmers within each cluster.

Collaborative Approach to Tools and Resources

A key feature of E350 was the collaborative approach taken to programme delivery. Collaboration occurred across the region between local and central government, industry, sector and farmers. This was particularly evident with the sharing of tools and resources for the programme.

All 50 target farmers were supported to complete a Whole Farm Assessment - a DairyNZ tool that was adapted for the sheep and beef farmers in the programme. The tool is designed to analyse the whole farm system to identify and prioritise key issues, opportunities and options for change in line with the farm business strategy. The assessment combines analysis of physical and financial benchmarking data with on-farm observation and a review of business objectives and management practices. The assessment allowed farmers to better plan for the future, making meaningful and measurable changes and developing strategies to cope with issues outside their control, such as COVID-19 and year-on-year droughts.

Through E350, a high number of target farmers, along with some mentor and associate farmers, also completed DairyNZ's Mark and Measure programme, a three-day course to help farmers learn key business concepts and skills and develop their own vision and farm strategy, as well as the gain confidence implement and monitor this plan over time. Through this course, farmers had the opportunity to use DairyNZ's 'planning wheel', a tool to reflect on their personal values and vision. In addition to this programme, all target farmers were introduced to the concept of a wellbeing score, designed to help build a foundation for everyone to talk openly about how they were feeling by rating their wellbeing from 1-10. This score was included in reporting to mentors and farm consultants, and created a conversation starter to check in on how people were feeling.

Northland Regional Council and Fonterra provided vital support for the development of Farm Environment Plans and Council's Land Management Advisors & Fonterra sustainable dairy advisors were available to help farmers make environmental sustainability decisions, through the provision of advice and funding. Similarly, Auckland Regional Council funded the development of Farm Environment Plans in their territory and Fonterra developed Tiaki Farm Environment Plans for all Fonterra dairy farms in the region. Associate farmers were supported by the DairyNZ and Beef + Lamb New Zealand extension teams.

In addition, participants were involved in various activities and utilised a wide range of tools / resources through their involvement with E350. The events offered varied, depending on the cluster role of participants (target farm, mentor farmer or associate farmer), and on the year given that adaptations were made throughout the programme period. At times, due to COVID-19 restrictions and other challenges, aspects of the programme were delivered online rather than in-person.

Activities included:

- Cluster discussion groups
- Events (e.g. 14 recognition evenings)
- Environmental workshops
- · Farm Environment Plan development
- Farm team visits
- Field days and field trips
- 3 Mark and Measure courses
- Newsletters and videos
- One-on-one discussions
- Public field days
- Upskilling workshops (e.g. for mentor farmers and rural professionals)
- Wellbeing score used with Target farms and consultants
- Wellbeing workshops (e.g. wellbeing workshop with DairyNZ's wellbeing team, a GP and RST; mentor workshops with a counsellor)
- · Whole Farm Assessments





14 recognition evenings were held throughout the 5 $\frac{1}{2}$ years of E350 to acknowledge the achievements of target farmers.

Above: Recognition Dinner Whangarei 2020

"The big benefit, and certainly towards the later end of the programme, has been the connections between farmers. It's the connections and support networks... These relationships have given them confidence to ask for help or advice."

"Our wellbeing was so low at the beginning of Extension 350...
We cannot emphasise enough how it has helped our mindset having a team of Extension 350 people to help us improve ourselves."



During the COVID-19 lockdowns, E350 supported farmers to continue learning from one another through online videos. The videos are all available on Youtube.

Above: Lachie and Dave, McLean Farm Waipu

"I've got more confidence to call other farmers now - if something goes bad, I would have kept it quiet before – there is nothing better than hearing someone else's bigger failure! And that makes me forget my problems and we have a laugh together. A problem shared is a problem halved."





Above: Mark & Measure 2021

Evaluation

Evaluative activities were included in the original E350 design, with resourcing primarily allocated from partners' in-kind contributions to the programme. This funding supported farmer surveys, sense-making workshops (for the project team, steering group and consultants), the development of the programme logic framework and dedicated progress workshops which were coordinated by AgResearch Ltd. In addition, biannual surveys allowed all participating farmers (target, mentor and associate) to feedback on their experience. The surveys were tailored for each of the farmer groups and covered perceptions around whether E350 was adding value to their business, plus targeted questions about the three planks of financial performance, environmental sustainability and personal wellbeing.

By 2018 the project recognised additional support was needed to support the level of external evaluation that was envisioned. This evaluation would support independent thinking and external rigour as well as ensuring ongoing reflective thinking and creating a structure for ongoing programme reviews. Funding from Sustainable Food and Fibres Future (SFFF) in late 2020 led to the engagement of Scarlatti, which allowed for more extensive evaluation and data collection. This research aimed to capture and understand farmers' journeys and ensure learnings from E350 as a whole could be shared and implemented appropriately for future programmes. This work was further supported by DairyNZ and Lincoln University scientists.

Ongoing learning and adaptation was supported by Scarlatti throughout the programme, delivered in the extensive Summative Evaluation Report¹⁶. Over the course of E350, a wide range of evaluation activities were undertaken to gather data for analysis: farmer surveys; farmer exit interviews and discussions; stakeholder interviews, surveys, meetings and discussions; impact modelling; steering group surveys; document stocktake; evaluation group meetings and workshops and deep dives into key indicators of success.

The research aimed to answer the following questions:

- What has happened within the Extension 350 programme?
- What changes in skill, attitude and behaviour are being exhibited by farmers and stakeholders, and what has driven this change?
- How well has Extension 350 been designed and delivered?
- Has Extension 350 achieved the cross-agency collaboration and 'learn as we go' philosophy that the programme aspired to?
- What benefits has Extension 350 delivered for farmers and programme partners?
- Has investment in the programme been worthwhile for farmers and programme partners?
- What has been learnt through the development, delivery, and evaluation of Extension 350?

Towards the end of the programme, Scarlatti's research crossed over into wider academic research undertaken by Lincoln University, including multiple papers looking into building resilience, the value of agricultural extension programmes and learnings around farmer change. Further results of Scarlatti's evaluation are captured in the Learnings and Reflections (page 22).

"Getting people off-farm is a constant challenge. But they really have to get off-farm because that is where you learn."

¹⁶ Summative Evaluation Report, Scarlatti (2022)

BUDGET

The programme budget for E350 was modelled on relevant case studies and with input from stakeholders. Scarlatti developed the wider financial model used in the evaluation. The financial outcomes for E350 were primarily resulting from an on-farm practice change. Scarlatti developed a model that placed indicative financial values on these outcomes, in consultation with the farm consultants and the project team. In-depth case studies were then used to calibrate the wider model.

Financial Modelling

The modelled financial benefits of E350 were evaluated by Scarlatti and are presented in the table below. The lower and upper bounds acknowledge the level of uncertainty in inputs and future outcomes to create a financial benefit range. The modelled financial benefits for E350 suggest that for every dollar invested in the programme, between \$7.60 and \$18.00 in financial benefits will be generated as a result, with a midpoint of \$11.60.

Particulars	Lower bound	Midpoint	Upper bound
	\$ millions	\$ millions	\$ millions
Annual farmer financial benefits			
Target farmers	1.9	3.6	6.8
Mentor farmers	1.0	1.2	1.4
Associate farmers	1.6	1.9	2.3
Total annual farmer financial benefits	4.4	6.8	10.6
Total farmer financial benefits (2019 – 2036)	43.5	66.3	103.5
Total investment* (2016 – 2022)	3.75	3.75	3.75
Present value (2016) of farmer benefit	22.1	33.6	52.5
Present value (2016) of investment	2.9	2.9	2.9
Present value farmer benefit / present value investment	7.6	11.6	18.0

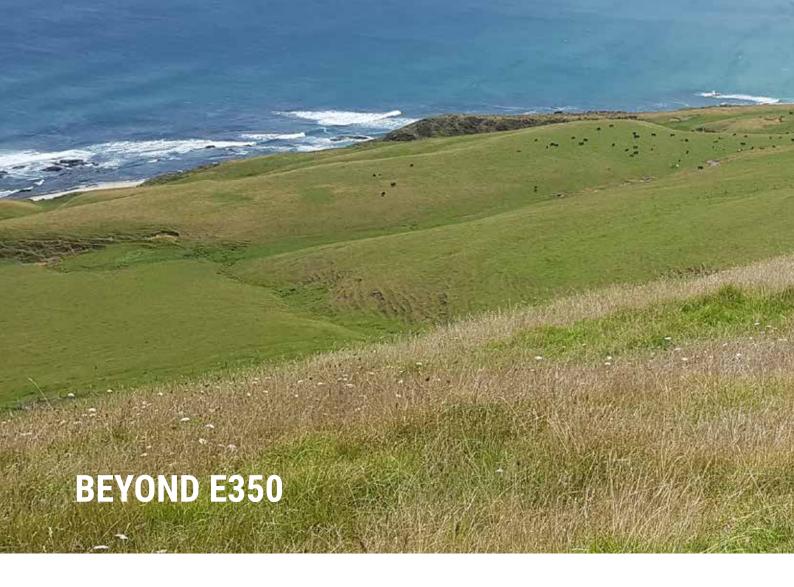
^{*} Investment includes both cash and in-kind contributions.

Additional programme funding was sought in late 2020 from Sustainable Food and Fibres Future (SFFF) when it was recognised that engagement from associate farmers was lower than anticipated. Associate farmers were seeking to become more involved in E350 beyond the prescribed bi-annual on-farm meetings with their target farmers, so funding was sought to support increased involvement from associate farmers. The additional funding supported a range of engagement activities, including facilitated farmer workshops to better understand the associate farmer's needs and potential delivery solutions, additional associate farmer group meetings and access to Mark and Measure workshops.

Finalised Project Costs

The table below outlines the project costs and income, from the initial planning stages in 2016/17 through to the project completion in 2022/23.

Project Costs	
Operating Expenses	\$ 1,418,715
Communications and Farmer Events	\$ 185,700
Steering Group Costs	\$ 132,803
Project Development and Evaluation	\$ 160,407
Project Farmer Costs - Consultants, Target and Mentor farmers	\$ 2,154,319
Surplus	\$1076.00
Total	\$ 4,051,945
Funding	
Ministry of Primary Industries	\$ 1,499,000
Northland Regional Council	\$ 799,021
Beef+Lamb NZ	\$ 255,500
Farmers Contribution	\$ 310,000
DairyNZ	\$ 605,000
Northland Inc	\$ 343,000
Auckland Council	\$ 16,500
SFFF- Associate	\$ 225,000
Total	\$ 4,053,021



With E350 now complete, farmers and stakeholders are looking beyond the programme for new opportunities to support the sector and continue to build on successes achieved. It is strongly believed that the foundation has now been laid for farmers to feel empowered to continue using the skills they've learnt to advance their own business and share this knowledge with other farmers to benefit the wider community.

Benefits of E350 will continue to be seen across Northland in years to come, through succession planning, environmental sustainability actions, strengthened community and sector relationships and collaboration within the industry. There are obvious short-term opportunities to extend the benefits of E350 by making existing tools and resources available to other farmers, as well as encouraging the expansion of farming networks to create stronger communities and enhance farmer wellbeing. The message to farmers is: say yes to the next opportunity!

One of the key considerations with a programme such as E350 is the potential for others to learn from the hard-earned knowledge the programme participants, and then adapt the programme for other regions. This would be possible with commitment from an energised and motivated group of farmers and industry professionals who have support and funding from regional leadership.

E350's Secret Sauce

With programme transferability in mind, E350 stakeholders have outlined what were considered to be the vital ingredients that contributed to - and resulted in - the programme's success:

- Farmer-led, farmer-focused model with farmers learning from farmers
- Committed industry collaboration, pooling funds and sharing resources
- · Northland Inc's autonomy to deliver the programme
- A flexible work plan that could readily adapt to changing times / needs
- Opportunities for farmers to access strategic business planning tools
- Connecting farmers to build strengthened communities and enhance wellbeing
- Farmers being willing to 'open' their farms and share goals with others to create accountability
- Strengthening relationships within the rural sector to build resilience (NRC, banks, vets and also industry organisations such as Fonterra)
- Clear benefits for those who were 'giving back' to farming, such as mentors and stakeholders
- A regionally developed programme built in Northland for Northland, but also a model that could be used elsewhere

Above: Hammond Farm Herekino



Programmes to Consider

E350 stakeholders have also identified a series of questions that they recommend future programmes consider before embarking on a similar programme:

- How will you continue the momentum of aspects of the programme, after the formal programme ends? For example, what does sustainability for the programme look like? Could a tapered funding profile help?
- What are the key attributes of your farmer cohort, and what does this mean for their engagement and change journey? For example, Extension 350 focussed on middle-tier farms, with the goal of lifting the Northland pastoral sector as a whole. This creates opportunities, but also brings some challenges which need to be mitigated, as these farms vary in the quality of their networks, knowledge, engagement and skills.
- What is the acceptable distribution of benefits between different groups of farmer participants?
- Which extension models are most suitable for achieving change in different areas? For example, could less-intensive programmes be more suitable when focusing on a single priority such as environmental sustainability?

- engage a large number of participants, or is it more suitable when depth is the priority?
- Is there a role for extension models to support Māori farmers and incorporations, and what would such a by Māori for Māori approach look like, in relation to programme design, development and delivery?
- How can the extension model be best used in conjunction with the changing legislative and policy settings?
- How can the extension model better incorporate climate change, particularly within Northland where the effects of climate change are being felt already?
- How can this model be applied across the primary sector, ie including horticulture? How can we put in place proactive support for primary producers to implement adaptive management focusing on optimal land use (looking at parcel of land and identifying where best to undertaken horticulture, dairying, riparian planting, revegetation etc)?

ACKNOWLEDGEMENTS

E350 would like to thank everyone who contributed to ensure the successful delivery of this programme, in particular the following:

The 384 farmers involved • DairyNZ • Beef+Lamb New Zealand • Farm consultants • Fonterra

We also acknowledge our funding partners:

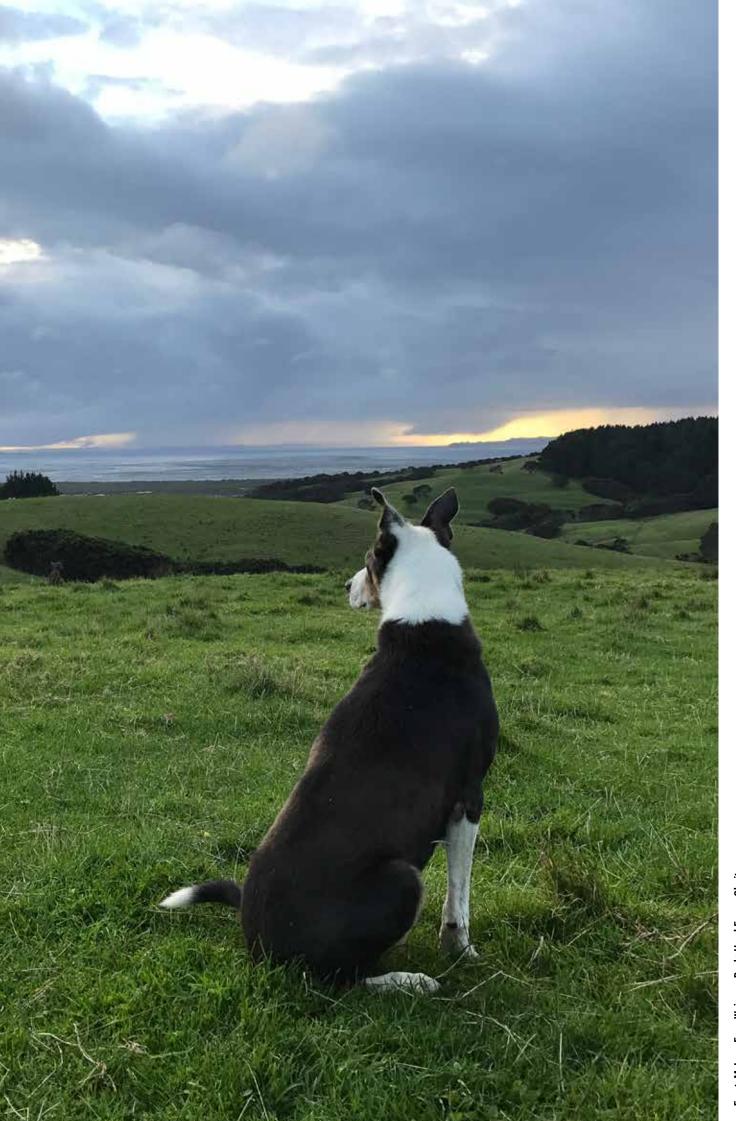












Front: McLean Farm Waipu Back: Hood Farm - Glorit