

# Farmer readiness workshops

Report from workshops conducted in March 2022

Full report

April 2022

Report prepared for the Climate Change Commission by Confluence Consulting Ltd with support from Reframe Aotearoa Ltd

# Contents

|  |           |
|--|-----------|
| <b>Approach</b>  | <b>4</b>  |
| <b>Theme 1: Capacity and capability</b>  | <b>6</b>  |
| Capacity and capability: <i>Of farmers and on farms</i>  | 6         |
| Capacity and capability: <i>Non-farming actors and administrative systems</i>  | 7         |
| Capacity and capability: <i>Solutions for addressing these issues</i>  | 10        |
| <b>Theme 2: Data-readiness</b>   | <b>12</b> |
| Data-readiness: <i>Farm operations data, and established practice</i>  | 12        |
| Data-readiness: <i>Varying levels of comfort with resourcing and integrating new forms of data collection and analysis</i> | 13        |
| Data-readiness: <i>How much more, and how fine do we go?</i>   | 14        |
| <b>Theme 3: Interaction and integration of emissions pricing with other regimes</b>  | <b>17</b> |
| Interaction and integration: <i>On-the-ground management and decision-making</i>   | 17        |
| Interaction and integration: <i>Administrative and structural</i>  | 19        |
| <b>Theme 4: Farmers leading with good practice</b>   | <b>20</b> |
| Farmers leading with good practice: <i>We're already doing it</i>  | 20        |
| Farmers leading with good practice: <i>Hope and expectation</i>  | 21        |
| <b>Theme 5: Sequestration</b>  | <b>23</b> |
| Sequestration: <i>What to count and how</i>  | 23        |
| Sequestration: <i>Responding to uncertainty</i>  | 25        |
| Sequestration: <i>Concern about conversions and consequences</i>   | 25        |
| Sequestration: <i>Preferences</i>  | 26        |
| <b>Theme 6: Pathways forward</b>   | <b>27</b> |
| Pathways forward: <i>what else can we do?</i>  | 28        |
| Pathways forward: <i>for some, this will mean the end of farming</i>   | 29        |
| Pathways forward: <i>Pathways in sight</i>   | 30        |
| <b>Theme 7: Farmer buy-in and how system characteristics affect it</b>   | <b>33</b> |
| Farmer buy-in: <i>Framing and portraying farmers and farm emissions in the public discourse</i>                            | 33        |
| Farmer buy-in: <i>Noticing and rewarding effort and/or progress</i>  | 36        |
| Farmer buy-in: <i>What's the point, the big picture</i>  | 37        |
| <b>Other themes</b>  | <b>39</b> |
| Other themes: <i>Time horizons, choices now and options in future</i>  | 39        |
| Other themes: <i>Revenue being recycled into better practice</i>   | 40        |
| <b>Appendix: Climate Change Commission presentation</b>  | <b>41</b> |

# Approach

## Context

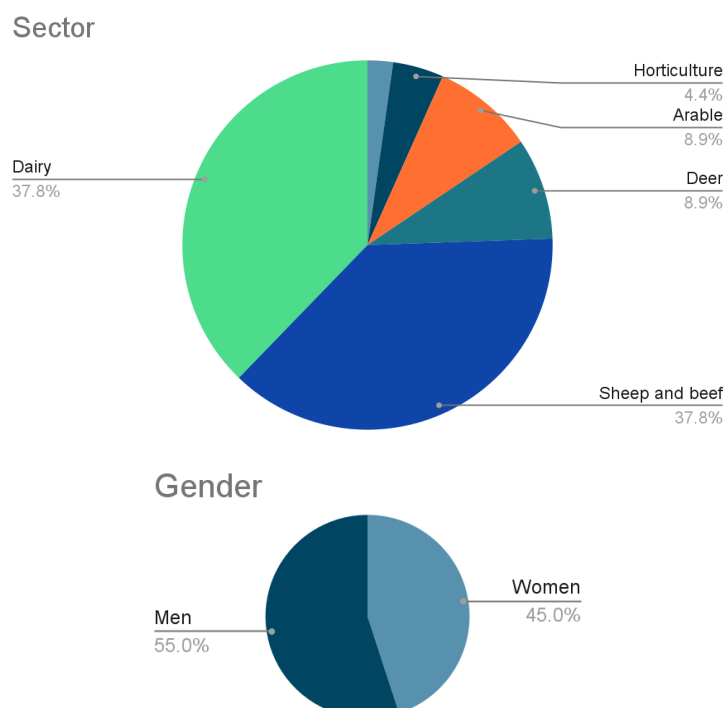
In early 2022, the Climate Change Commission conducted a series of four online workshops with farmers from around Aotearoa New Zealand. The overall purpose of these workshops was to understand farmers' readiness for a farm-level emissions pricing mechanism. The workshops were designed and led by a team of external consultants, and facilitated with the support of staff from the Commission. This report summarises the key themes that emerged from these workshops, and has been written by the external consultants to present back to the Climate Change Commission.

The workshops overlapped with the end of the consultation by He Waka Eke Noa on their proposal for an agriculture emissions reduction scheme, and each workshop's introduction requested participants to consider that consultation as wholly separate to the engagement by the Commission. During the workshop period, several announcements also appeared in the media about climate change, including proposals to amend the treatment of exotic forests in the NZ ETS.

## Participants

The workshops were advertised as seeking individual farmers, and publicised through sector groups such as Rural Women NZ, NZ Young Farmers and Landcare Catchment Groups.

Forty individuals from across Aotearoa New Zealand took part in the workshops. Data on basic demographics, including farming sector and region, were gathered via the registration form. Data not gathered included data that could identify individuals or feel more intrusive such as ethnicity, age, farm scale, and turnover.



## Workshop format

The workshops were designed to be accessible and engaging for participants, and to give individual participants the opportunity to meaningfully share their perspectives. All workshops were identical in format: all were held on Zoom, and each workshop was 1.5 hours long. To give participants options for attending, two sessions were in the evening and two at lunchtime.

Before the workshop, participants were sent a short information sheet about the content of the workshop. At the start of the workshop, and before each question, staff from the Climate Change Commission shared content and context for each question. They spoke to a slide deck - see Appendices. Participants were given time to ask questions for clarification.

The workshop was structured around three discussion questions:

- **Question 1:**
  - Given what we know needs to be part of a farm-level emissions pricing mechanism, how ready are you to interact with it?  
*This question was focusing on administrative and regulatory activity such as data entry, reporting, and auditing.*
- **Question 2:**
  - Part 1: What pathways do you see to reducing your on-farm emissions, and/or removing carbon via trees? Why?
  - Part 2: What other pathways could you take, and what would enable you to take them?  
*These questions were focusing on the biophysical aspects of farm management and emissions reduction.*
- **Question 3:**
  - Looking to the wider system, what are the biggest barriers - or opportunities - that are influencing the pathways you see on your farm?  
*This question invited observations about the systems and phenomena that influence the prospects for farm-level emissions reduction, from region-wide through to internationally.*

For each question, participants were split into breakout groups of either 3 or 4, accompanied by a facilitator, and invited to each respond in turn to a series of questions. The discussions in the breakout rooms were recorded using Zoom and then transcribed after the session.

## Data, analysis and reporting

All of the recorded content from the breakout sessions in the workshops was reviewed, de-identified, themed and coded using a database tool. The results of this analysis formed the basis of the theming shared in this report.

Seven prominent themes clearly emerged from the data, and each of these had two or more sub-themes within it. This report notes other themes that recurred but were much less prominent than the main themes, which are presented in Other themes.

The report itself was prepared for the Climate Change Commission by the independent facilitation team from Confluence Consulting and Reframe Aotearoa that were contracted to support this process. Direct quotes from participants are provided to illustrate the themes, with minimal editing for clarity. Included quotes are an illustrative sample of the conversation relating to that theme.

# Theme 1: Capacity and capability

A significant theme emerging from discussions across all three sessions in the workshops was capacity and capability across the sector. This included the availability of people, and the availability of skills and knowledge, to participate in an emissions pricing mechanism, and, to make changes to the way farms are managed to respond to price signals.

Discussion on this point spanned both focuses of the first two workshop questions: the administrative and regulatory activity likely to be required, and the biophysical aspects of farm management.

This theme included three main sub-themes:

- Farmers' and farms' own capacity and capability to plan for and respond to price signals from emissions pricing (participating in the system, and reducing emissions)
- The capacity and capability of "non farmer" players in the system to help with both these pursuits, such as rural service providers, educational institutions, and government actors
- What farmers thought will best address issues of capacity and capability on-farm and in the non-farmer sector

## Capacity and capability: *Of farmers and on farms*

Participants spoke often about farmers' capacity and capability to plan for and respond to price signals from emissions pricing. This covered four broad areas:

- Ability to access information about their own farm (e.g. knowing how to get a detailed enough soil map) that would help to inform decision making. Related to this is understanding how decisions might affect their farming business: how those emissions-reducing decisions interact with business planning, tax, accounting and so on.
- Farmers' capability and capacity themselves to implement actual changes on-farm to reduce emissions – knowledge of the options available, and capacity to implement them (including available time and labour). This was of particular concern for smaller farmers.
- Farmers' understanding of environmental interactions – e.g. whether a farm has any "biophysical headroom" to make emissions-reducing changes.
- See themes: Pathways forward (theme 7), and Farmers leading with good practice (theme 4).

Two common sentiments were:

- Many farmers are already reducing environmental impacts *because it makes good business sense* – "we're already doing it because deregulation drove efficiency and profit focus". Typically, this pertained to good business practices that reduced cost, such as precision irrigation and fertiliser use, strong use of data in decision making, and tactical use of market timing such as stock finishing and kill times.
- Many farmers are already reducing environmental impacts *in spite of the economic costs to their business* – "we're doing what's right, against good business sense, because we care". This tended to refer to good practices for biodiversity and water quality.

"And it's going to be reflected in my annual accounts, my carbon number, because it's a value proposition. Carbon auditing as another measure of production efficiency. And that's kind of been lost in the noise a wee bit. I can start tying in my carbon number and my production system, and putting an economic number around some of that. I'll learn really quickly."

"I feel kind of ready. This has been flagged for a while. I feel we use quite a bit of software that collects most of the data anyway. [...] What I don't need is another layer of compliance. I don't want to have to employ a farm secretary, so to speak, like they do in the UK"

"You probably look at some of your neighbours and shake your head at [them] because they haven't done anything for the last 40 years, and we all see those! So how do we actually get them to make changes, because they are the ones that will actually make the biggest gains for us as a country."

## Capacity and capability: *Non-farming actors and administrative systems*

### **Administrative systems**

- Participants observed that the farmers who participated in the engagement workshops are more likely to have a higher tolerance for the administrative and substantive burdens of participating in farm-level pricing than farmers who "haven't got as far down the path".
- They also discussed their limited capacity and capability for bureaucratic and administrative burden such as gathering data, analysing and using it, reporting and being audited, and their desire to minimise this. See Data-readiness (theme 2).
- There was general apprehension about the prospect of creating new administrative systems within government and "building up the bureaucracy" to support a farm-level pricing system
- Using existing IRD systems and reporting rhythms was generally preferred, as a way to reduce the administrative burden on farmers.

"And so to me, it seems to be a big bit of bureaucracy that, you know, what if you've got a farm levy approach set out in He Waka Eke Noa to reduce emissions by 10% by 2030 - well, potentially, you know, that's not it's not a huge reduction really, and that investment we're spending in in this bureaucracy. \$130 million could be better just spent on innovation on methane reduction."

"I'd probably just bring up one other thing and I think you're going to get a lot of pushback from farmers around the building of the bureaucracy around this and the cost of it. I think that's just come up in He Waka Eke Noa. And I've seen a bit of discussion, and I'd be in favour of, 'Why can't we report through Inland Revenue like we do with all our other financial numbers?' That would be my view there - not build another whole bureaucracy around it."

"If you just think about it from an expense perspective, we're a really small country, why would they have a different person coming to measure and check all these different things? Part of me is like, I'll let them do it, because it'll never happen. Because they'll never employ all those people - and imagine the systems they have to have to coordinate that."

"So I'm ready to interact with it. I have the time to, you know, gather regular information, it's happening on a daily basis in my head, but being able to put that onto a spreadsheet or into a document - it's the conversion of that information to someone from an administrative perspective to be able to then interpret - someone who sits in an office somewhere and perhaps doesn't know what I'm talking about. And that to me is terribly, terribly scary. That frightens me. So I'm ready to interact, but I'm terrified of what that might look like."

"Try to sit and watch me and my husband and the other team members about how much paperwork we've already got to do. And I know that the others on this call will be the same. If there's a way to cut down the amount of paperwork in the amount of things that we've got to stick the numbers into, like stock recording, but we've got a seamless [line] direct to the accountant and everyone else already. So is there a way to just make sure we don't have to double up on that or do a click of a button. And that's just, yeah, it's kind of pie in the sky looking at all the things we're already doing"

"We do not have the capability here in Taranaki, at the moment, and I know it's nationally, but I think we're one of the worst regions. At the moment, there are all of five registered to use FARMAX - five, that are accredited in the whole region. And there's probably not that many more who can use Overseer. We're really desperate for capability."

### **Rural professionals and advisory services**

- In contrast there was general recognition of the prospect of New Zealand developing a much bigger rural services sector (e.g. farming consultants), and acknowledgement that this would be necessary.
- Participants also spoke about the importance of extension and outreach for R&D and innovation, and for practical support to help farmers improve farm operations generally - not just in the context of emissions reduction.
- Practical support from professionals was seen as an important complement to the influence of younger generations of farmers (who were seen as inherently better at "more modern" farming methods, such as using data to inform decision making, and in some cases were helping older family members on family farms).
- Several participants mentioned the need to supplement their capacity with people brought in, but highlighted affordability challenges.
- There was some scepticism about the current capability of some farm consulting services - including how some consultants promote specific tools or software (often because their business is tied to these tools), but these may not be appropriate for individual farmers.

"There's been a lot of training going on, my understanding is amongst the advisory bodies... ended up going mostly around upskilling, in the absence of any real regulation as to what it's gonna look like, and not knowing exactly what the report is going to be or what mechanism we're going to use it was more mitigation options. [...] My view's probably that they are quite well prepared. I think Beef & Lamb and DairyNZ have got a lot of good resources on board for that, developed a lot of great templates. Probably He Waka has pushed a lot of that too, that they've had to be ready, because if they're going to help design the system, and then they should be ready to deliver it. So I think the background support functions, I think, if not there already will not be far behind by the time they're required to be."

"For the horticultural sector, from my perspective, access to R&D is the real big issue. Access to experts who know, actually, the horticultural sector and the many variants from, you know,



from macro gardening through to large scale orchard production, you know, enterprises. Is there an equivalent of an accountant to do your emissions trading? There is, you know, to do your GST. So maybe experts are a big missing piece of that, you know, to be able to run eye over and not consultants, but kind of accountants plus."

"[consulting and advisory service] is out of reach for most farmers, yep, because of the cost. It's just another thing. And I think [...] who's got the best knowledge of this place, this farm, and at the moment, it's me. Or possibly there might be a couple of other people that would have good knowledge. But no, I wouldn't waltz onto another farm and start suggesting things, I'll probably spend a year with them, and then maybe point out a couple of things they could change. Expertise is pretty hard to get good enough to be able to actually advise, unless you're a very specific type of consultant, as in, a vet is a consultant for animals."

"For me, the capability on farm is huge. But off, the support services. Who's gonna - and I don't say this in a horrible way - who's going to walk beside you and hold your bloody hand while you figure out how to rejig what is ultimately the source of revenue for you and your family? You know, that's a really powerful thing to be asking people to interfere within. I don't think we've got enough people out there to support 40-50,000 or more ag-related families that need to change how they're doing things. And we're going without information and into the unknown in a really short timeframe. And there's maybe 1000 professionals that have got the capability to assist. It scares me..."

"...headspace is usually the biggest challenge. And but the way you actually move people through a period of uncertainty or a period of change is actually support. So I think if the government could actually ensure that there's enough people that can walk with farmers or groups of farmers through a period of change and a period of uncertainty, and create that comfort and belief in comfort that we can get through this - there are some challenges and there's going to be some costs, that's a given - that's the key part."

"So I think they [farm consultants] would struggle with that, with getting the level of [data] detail to use the more complex systems. I think it would get quicker over time. And if you knew, or if the people - the rural service providers helping you, like your reps - everyone knew what needed to be put in, in the format it needed to put and end reported, that way it will be way faster."

"Because we're involved in this precision ag space - one of the things about it is collecting the quality of the data. [...] One of the things you might not know [as a user of Tracmap] is they don't actually record what you think they record. So the quality of the data is rubbish. So if we're going to use stuff, and we're going to have to actually be accountable for it, then - doesn't matter whether it's fertiliser companies or whether it's us individually or who it is - the data has got to be robust. And that's one of the challenges. I don't think there's enough standards here that people realise what they're not getting, as much as what they are getting."

## Capacity and capability: *Solutions for addressing these issues*

- Farmers highlighted a range of possible approaches for helping to overcome capacity and capability challenges on farm, and for the sector more broadly.
- Extension was seen as very important. Many farmers emphasised extension initiatives as the best destination, or most effective application, for recycling emissions levy revenue. See also Farmer buy-in (Theme 7).
- Information and demonstration being provided in a way that is local and face-to-face was widely seen as a key factor in farmers' uptake of better practices, given the variability of farms and the intimate entwining of a farm with the farmer's identity.
- Participants also spoke about neighbour relationships, describing how the effectiveness of neighbour-to-neighbour knowledge transfer depended heavily on personalities and on neighbours' capacity to spend time helping others.
- They also spoke about bank managers, accountants and other actors - who were seen as having a neutral or service-focused role, and a holistic view across a farm business. While not having land- or animal-specific knowledge, people saw value in how these actors could direct a farmer's attention to parts of their operation that may otherwise be neglected or overlooked in the day-to-day busy-ness of running the land.
- Formal local or regional learning opportunities such as Fielddays and farm visits were seen as very effective for acquiring practical skills and approaches.
- Many participants also identified catchment groups or other local collective actors (community or service-sector) as key vehicles for this work of supporting farmers and the transition. There was the observation that these groups should never venture into exercising a regulatory role, as this was seen as likely to break the trust crucial to farmers' participation.

"[...] and you have to demonstrate [better practice], you know, telling farmers that something works, doesn't work, you have to demonstrate it to them, they have to go and show them at a Fieldday or something like that the farmers are visual learners, they don't read papers and just make a decision on that. They generally, if they can see someone else doing it, that's how they learn 'em. And then decide to uptake that technology if it does work."

"Well, we've got a system, which has been changed at the moment, for training farmers. It needs to be part of that, and whether it comes out online, or whether it comes out in classes. But I think that these, these middle aged farmers, have got to be able to listen to someone who says, 'You might do this, and you might do that'. At the moment, all they're told is that the chemical companies know what they're doing. It doesn't help. Yes, they need training. But it'll have to be done in a way that they'll listen. I went to one of the beef and lamb things recently, and there were some farmers there who were doing really interesting things. But there were a lot of other ones who couldn't see how they could possibly do anything different. Or cope with the paperwork. Yep, I feel really strongly about that."

"We've got a local Landcare group here that's trialling doing IFP work. It's trialling work for mitigation of nitrates, that sort of thing. It's farmer led, it's council backed, it's got some government funding, you know, working with local groups to deliver on this so it's not necessarily government or council or consultants having to deliver on, on how to do this. So actually there's farmer groups already underway trying to support other farmers in becoming more efficient, mostly from a water quality perspective, but greenhouse gases could easily tag onto that. So yeah a higher level of support for those groups, I think would really encourage

the programme and feel - help farmers feel more supported, rather than having to pay another consultant to come in and tell them what to do.”

“I think that there's a lot of that resourcing and ability already out there just need to do the fostering. So obviously, you got your levy bodies are already good at this. I've done it for a while, but the CRIs and universities are good there too, obviously, the more money the more research that can go on.”

“So just because there's some articles put out [about regenerative agriculture] sometimes people go down a bit of a rabbit hole. [...] So it's just knowing what - as you said before both of you, you know, what works in our systems, that's the best for us. Because what's the best for you is different to what's the best for me.”

“But I probably come back to you know, like our Landcare group is doing exactly that. We've had a few days on fertigation, on drip irrigation, on - you know, all sorts of things just to get farmers to understand what the options are. And farmers like to learn off local farmers, you know; I don't want to hear about something that's going on in the Waikato or Northland because my climate is different, my soil's different, I've got different infrastructure. And so if you can kind of support local solutions for local people, then you end up with better outcomes. In theory, again, it comes back to the local movements that are happening throughout the country. But just better supportive of farmers basically delivering it themselves alongside the, you know, the regional councils and in the levy bodies.”

## Theme 2: Data-readiness

Most comments on this theme arose during the first session in the workshop (which focused on the question “Given what we know needs to be part of a farm-level emissions pricing mechanism, how ready are you to interact with it?”). This session encouraged people to focus on their readiness for complying with administrative and accountability requirements associated with participating in an emissions pricing system.

This theme included three main sub-themes:

- What data people are already gathering on-farm about farm operations, and readiness for a next step
- Varying levels of comfort with resourcing the collecting of data, and integrating new forms of data collection and analysis into farm operations
- Discussions about how granular data-collection and use should be for a farm-level emissions pricing scheme to work well

Participants also spoke often about how data about sequestration would be collected, and their apprehension about what would and would not be recognised in the pricing system, and the potential complexity of this. Their comments are covered in detail in Sequestration (Theme 5).

### Data-readiness: *Farm operations data, and established practice*

- Participants saw data as both power (knowledge) and cost (time, effort, and money).
- In terms of data about general farm operations (stock, crops, soil, water, nutrients), there was quite a lot of optimism about, or at least a sense of general readiness, for taking the next step of collecting it and reporting it for the purposes of emissions pricing.
- As noted in Theme 1 above, there were concerns raised about the time and effort associated with collecting and reporting data, and a general desire to streamline and integrate data collection and reporting within and across existing systems as much as possible.
- There were also observations that the group participating in these workshops will likely include an over-representation of farmers who are already thinking analytically about their farms compared to the wider population.

“I think from our farming business, we're collecting a lot of data, particularly around animals, stock reporting, and all of that side of it. My hesitation, my worry, is around the sequestration and working that out. But there's still a little bit of water to go under the bridge in that space anyway, so time will tell what that looks like.”

“Yeah, so we're probably pretty comfortable. We're doing it for other programmes. My only thought is that we're already recording it in other places - it would be nice to have a tool that was streamlined so we didn't have to punch in the exact same numbers into another calculator. Like, there was a way to import it from somewhere else - I can see [other farmer] giving me the thumbs up. So it's just making it easy for farmers to do it themselves because, yeah, it can potentially cost a lot. But, too, having a review process or something in place, I don't know, it's just coming out of my head. But yeah, I'd say our business is pretty comfortable with calculating that stuff.”

"The short answer for me is yes. Super prepared to run the admin on a farmer level pricing mechanism - super easy for us. We've been doing our carbon budget for five years now. I'm pretty across that data. We've already got it super accessible. And understand that pretty well. But yeah, probably don't speak for too many other farmers on that, because I guess we've been ahead of the game on our carbon budgeting for a while now."

"We've got an Overseer account. I guess if we hadn't been sort of supported by Silver Fern farms and Ravensdale Projects, outside their normal sort of business, I guess we wouldn't be there. But because we've done it for a couple of years, I feel like we've got some understanding, but that wouldn't be general for most farmers in our area. In fact, I don't know another one who has an Overseer account."

"I'll learn really quickly. That's based on experience when I was audited by Sainsbury's for several years, and really quickly began to see where the tweaks could be made to drive production efficiency and get my carbon number down. So I don't want to see duplication in the reporting. I think putting it through an accountancy system, in line with our annual accounts would be a very clever way of making some simple linkages."

"Just off the bat, [the key issue around data] would be sequestration, helping farmers understand what they've got, and how to measure it. Without, you know, incurring massive professional costs."

"For myself personally, I believe I've caught most of the data in my typical day to day fund management processes. I also collect most of their data just because I pay taxes. And so through my farm accountant I am already undertaking when I buy and sell stock, what my stock reconciliation is, purchase of fertiliser, purchase of supplementary feed etc. So it's already there, I do not need to replicate that. So, I would not like to see duplication of effort at all, we must be synchronised and must be a flow on, stage by stage, to avoid that duplication. Otherwise, we have cost creep, and those headroom costs are going to be massive. I'm already audited through my processes. In fact, I get audited by three processes."

## *Data-readiness: Varying levels of comfort with resourcing and integrating new forms of data collection and analysis*

- Complementing the sense of overall data-confidence of people in the workshops, younger farmers, and those who described themselves as more educated, were much more likely than others to see a certain amount of admin as worthwhile; or at least be more comfortable with more data-driven ways of doing business.
- Some participants described older farmers (including neighbours and themselves) as "doing data" in the way they'd done for decades – and acknowledged that this may not be enough for them to keep up with changes in the modern world.
- Participants also spoke about how they valued being able to bring their own intuition, 'gut' and experience into the decisions they made about their farm and practice; how this was linked intimately to their satisfaction and experience of being a farmer; and, how this allowed them to work more carefully and closely with the land and ecosystem.
- There was frequent acknowledgement of the resourcing burden of collecting, managing, and entering data for participating in a farm-level pricing system - see also Capability and Capacity (Theme 1).

- There was a wide range of views on how burdensome it would be to get the requisite data, depending on precisely what a farm-level pricing scheme looks like.
- Some participants felt it would likely be a minor shift, as they felt that “we’ve already been doing it”. Others were more concerned about labour and time for collecting and entering additional data. All agreed on the importance of any systems being easy and practical to use and integrate.
- Some farmers raised concerns about the ability of tools and models to capture efficiency improvements on-farm that would also reduce emissions.

“For the dairy farm that I work on, as the office manager, yeah, I think they're bang on ready to go for whatever option. [...] My parents' sheep farm, they're older generation, they're not loving the idea and all of the stuff that it's going to involve. [...] My stepping in to help them with that is going to be important, but overall, I don't think that they're really ready and prepared as much as they could be. I kind of think they've been like ostriches, “head in the sand hope we don't have to deal with it” sort of situation. But now that it's becoming more of a reality. They're looking into what they can do, but they're just not feeling as comfortable with everything yet.”

“Just knowing some of the average age of crop farmers, there will be some people that will struggle to, that have been doing it in the same notebook for the last 20 years, that it's just another admin job that they don't want to be doing, because they've got enough other requirements and paperwork coming at them.”

“So now I'm comfortable with what I know, and my data collection processes are in place. But, you know, it'd be great to see data collection integrated. And because we really need to, it has to be simple. Otherwise, people will put it off and then it becomes overwhelming.”

“I personally think we're pretty ready to go. We have done Overseer budgets for a while. And out of interest - was it late last year - I chucked in just the beef and lamb GHG calculator as well, easy didn't take very much time, bit of a different answer, but that's to be expected. I think the biggest thing for us that you know the inputting side of it is relatively easy, it's going to be what it looks like and what we can do to mitigate it and how that will work because there is nothing in that space already, like we've got a lot of stuff... we know we can easily do a stock rec and find all of our nutrient application and all of that stuff, that's pretty easy. But it's how we measure and record what we're doing to maybe mitigate some of those things. And the other thing that I have a question - and Overseer, I don't think really does all this well - is how do we reward farmers that are really good at what they do. So they're really efficient, because somebody that can finish a lamb in a short space of time is a lot more efficient than somebody that can't, and how we can capture some of those things.”

“And there needs to be a lot of facilitation with those separate private entities that own and operate [FARMAX, Overseer, Beef & Lamb calculator, plus Figure8, Xero, MYOB] to do that. Now we farmers can leverage and ask for it, but somebody else has to actually spur them on to, you know, there's a cost of development.”

## Data-readiness: *How much more, and how fine do we go?*

All participants strongly opposed any increase in unnecessary administrative burden when it comes to data collection and reporting, such as double-handling or duplication of actions (such

as data entry) across systems. Many farmers expressed dismay at the burden currently sitting on farmers and farming consultants. See Interaction and integration of emissions pricing with other regimes (Theme 3).

When discussing future data collection on-farm for the purposes of emissions pricing, there was a huge variety of views and no consensus on how granular to go with data collection. People spoke to different dimensions of the debate on how granular to go with data, and the pros and cons of simplicity versus granularity.

Two perspectives were most evident:

- How farmers may be rewarded or penalised for emitting and sequestering activity - including implications for early adopters
- The ability of the pricing system to recognise and reward efficiency improvements and emissions reductions, and the importance of farmers being able to see what will make the most difference to emissions and make decisions about their own management.

"That concerns me if you just have too broad a calculation system that doesn't actually pick up some of that stuff. That's why you want a simple system for people to enter if they can't be bothered, but if you're already doing it or want to do it, you should be able to get some recognition because you will help everyone."

"Maybe we need something a bit like the food standard where you have an A++ down to D fail. Get that recognition and reward through what you've been doing."

"You can have two options [...] which is a simple on-farm level, or complicated. And if people want to do group reporting, as long as they understand the legal requirements on one another, they understand what they're doing, that a group of farms or something that can join together. Fine. But I think starting at the point of manufacture just doesn't give the signals or the early adopters, and I'm sort of slightly disagreeing with [other farmer] politely, that if it's too simple starting now, you've been a bit unfair to people who've done a lot up till now."

"My parents still feel somewhat confused about it, which is why Mum got me to help in the first place, really, to help her put it together. But I think for me, it just comes back to like, what are we really trying to achieve here? You know, although a more detailed system might be more complex to implement, but at the end of the day, you know, when we're trying to actually reduce our emissions and improve our practice on farm, it probably is best that it's more detailed anyway. So [...] one thing I felt very strongly from my family is it just needs to be fair."

"I think the answer to that question would come from your farm system. Some properties are going to have a lot more to gain by a more detailed approach and a more simple system may have less to gain, so really if you look at it from an individual's point of view, that would vary. The reality is to achieve good outcomes, the more accurate the calculation is, the better it will be and the better it will reward (or not) people's behaviour to effect the right change. So I'm guessing I'm not giving you an answer - it's always going to be a trade off. But the more accurate that number can be, the better the system will be - within reason."

"I think the presumption is that everyone needs to know, down to the actual metric tonne, exactly what the liability is. And I dispute that because it's not worth our time to know that. I think that the thing that we are going to be wanting to track is progress. So I think we are better to have a slightly more coarse data gathering system, and less administrative time using

systems we already use in time that we already set aside to do things that are required for other administrative reasons. And that largely already hold our information. Because it's efficient."

"There's a lot of stuff is recorded. It's just how regularly you want it because if you start wanting monthly details you're getting too nitpicky really. With stock and just keeping NAIT records up to date with what's live and dead is hard enough, so yes. But on the sequestration side [...] for the blocks that are in hectares, that's fine, but when it's down to the trees that're singular or riparian or or that is probably not going to be worth it, in the first wee while anyway."

"I reckon if it can be something along the lines of like a GST return, like every couple of months. My GST is really easy, there's software that does it all for you. You know, that would be my end result, a good one. And then you can see the ups and downs throughout the year as well, rather than just having one big payment, or whatever, at the end of the year reconciliation, like a tax return, the accountant does it anyway. But you know, then you can see the flows and the ins and outs and it. The more data, the more information, the more you can understand how it works and manipulate it, you can manipulate your system for the result, whatever that might be."

"If the pricing mechanism is fine, granular enough, there are food additives and breeding and techniques like that, that could be used, but use... would need to be sure that the system will reward them."

"...there needs to be there needs to be a way to to reward the farmers that have done early stuff that have done you know, your early adopters that have gone in and done what they can already you know, some people haven't ploughed a paddock in, you know, 20 years, you know, there's a lot of people out there doing minimum tillage and all that kind of stuff already."

The question I'll probably have in my mind is when I start to look at some of the mitigations, outside of just cutting back on the amount of feed that we're feeding, whether those reporting systems are going to accommodate that. So might be I don't know, like, genetics that we're introducing into the cows, like obviously, it doesn't take care of, take into account any of that. If you know there's science that is really only just coming out now that we know Overseer – it takes probably four or five years to integrate some of the latest science that's coming out. So even though I might be integrating it all into my system, I'm still might be getting overcharged for it because all my mitigations aren't being included in Overseer. So that's probably – and I've seen that in the nitrate space for a number of years. So that's probably my question is Yeah quite ready from a level of reporting but more concerned about getting rewards for making the changes that are arguably going to drive change. How quickly is that going to happen?"

The thing that I wanted to add that has not been covered yet is the tools that are going to be given to people. We need to understand the feedback - feedback is vital. We need to be able to model and go, "Well, what if? What if I do this on farm? What does that translate to in terms of my cost or not cost?" And then do that well before so we actually plan years ahead and not be kind of, on the fly, responding, going "Oh, it's actually cost a lot more than I thought." So there's that certainty that idea of, we have modelling, we have data, we have tools, so that we can actually make those decisions in a sensible way with plenty of time. And I think that's the thing that probably the the single source of uncertainty right now is, well, "What's it going to cost? What can I do? And what impact does it have?"



## Theme 3: Interaction and integration of emissions pricing with other regimes

Overall, there was a sense that farmers are keen for integration of the different requirements being imposed by legislation - even without the prospect of an emissions pricing scheme for agriculture.

This theme included two main sub-themes:

- integrating the substantive decision-making of farm management, and
- integrating the data and accountability structures around that.

### Interaction and integration: *On-the-ground management and decision-making*

- Across the diverse farmers participating in these workshops, this was one of the few points that received universal consensus: the desire to see regulatory requirements across biodiversity, water quality, emissions, animal welfare, soil health, biosecurity integrated, ideally through the Integrated Farm Plans.
- People felt that this better reflects the on-the-ground reality of holistic decision-making on farm, and forces reconciliation between requirements on farmers that, at present, are sometimes conflicting.
- Some farmers voiced frustration about the lack of integration to date, and were concerned about the potential for 'shifting goalposts' as requirements under different regulations come online.

"[I want to] see just a clear vision of how it all integrates freshwater biodiversity, carbon. [...] I don't feel we really know what actions we should be taking because there's a lot of conflicting directions of travel out there. And so, it's very hard to make choices, you know, informed decisions on investments and farm systems."

"Because an integrated position's where I'm going to be considering climate with freshwater with biodiversity. I might be having to do some stuff because of fresh water - I might have to reduce my nitrogen loss to the receiving environment - and that may be a bigger step than it is regarding my greenhouse gas emission. But the two are so closely coupled together. So every farmer, if they took that integrated approach, would have to do something. And it may force them to be doing something on the climate, even though they could be highly efficient per kilogramme of product output. I think we know there's a lot of nuances within that."

"Yeah you know I talked about critical thresholds. So we need to resolve, you know, the National Policy Statements on freshwater, there's a new one coming out on biodiversity. There's one that's sort of half in play about elite soils. Until we join all these things up in an integrated manner. And then also, we understand what is truly marginal land, so that our usage of those lands is done for a good outcome, a best fit. And we don't, you know, misplace or misappropriately change land-use where it should not occur."

"The question said, given what we know needs to be part of farm-level pricing of emissions, I feel like there's still so much ambiguity in this area. And, you know, there's a myriad of regulations and reporting things that are coming at farmers at the moment. So I think, for me,

there's no problem reporting on emissions, or farm planning and stuff. But it's really clear that there needs to be an integrated and unified farm planning system where all these things are brought into one."

"So looking at including reporting from an entirely environmental perspective, from a number of aspects, whether it's biodiversity, water quality, greenhouse gases. So if that work can be accelerated to the point where ... because we've got fresh water farm plans needing to be started, by the end of this year, we're going to start reporting for greenhouse gases by 2024, NPS Biodiversity and SNAs, is gonna be middle of this year end of this year. So there's a lot of reporting coming up, but the integrated farm planning stuff, it's kind of a few steps behind, so if that can kind of be kicked off and brought together so actually, we can jump straight into that rather than having to build these parts separately, and then bring them all together later on would be a huge help."

"[...]as farmers we don't make one decision in a silo without thinking about all the flow on impacts and the biggest barrier is going to be how this policy is going to be designed. And it needs to take into effect that all the other policies that are going on at the moment, that are probably going to have some effect towards reducing emissions anyway, we are already planting off, our waterways are fenced, they're getting planted; currently none of that is going to fit under the ETS. But we - the last thing we want to do is start doing something that we think is the right thing and we've made a good decision for water quality, we've made a good decision for looking after our soil, but it hasn't been quite the right decision for emissions."

"Now, think about relating it to your end surplus, and what is my end loss at the root zone? What is my end loss to the downstream receiving environment with that catchment plan, and the monitoring that the regional council's undertaking. So then we're all part of our environment, you know, that mountains to the sea aspect, once again. So it's a fullness that we're asking for. Now, you're charged with just delivering a price farm level system back to the government? Well, we are suggesting that you actually need to go bigger, and really have an aspiration towards 2050 as to what really needs to be delivered for New Zealand Inc."

"I identify with an integrated approach. So I'm going to achieve a win that's going to have good outcomes for freshwater, biodiversity, rural communities, as well as the climate, because it's that whole landscape approach. And that, "where do I fit into that?", ensuring that I'm not misplaced, so I'm going to be right sized, well placed, etc. So when that's sort of told me I'll, I'll redesign, rebuild my farm system, to work to those critical thresholds that will enable that vision to be realised. And so there's some huge missing linkages in that currently. "

I think the biggest thing I'd like to be able to see is that the answer for climate emissions and dealing with emissions isn't dealt with in isolation. So we don't make any on farm decision without thinking about the ramifications and a whole different range of ways of how it affects us and how it affects water quality and what it does to the soil and [etc.]. So I would just love to say that this takes into account that, while reducing emissions, we want to look after our water, and we want to protect our soil. We want to increase biodiversity, we want to do all these things. But we can't deal with one, and then you change the goalposts.

## Interaction and integration: *Administrative and structural*

- Participants spoke about the need for a system that integrates the administration, bookkeeping and reporting requirements of different regulations, ideally through the Integrated Farm Plans or catchment plans.
- Several participants noted that a particular scale – catchment – would enable collaboration.

“When farmers get to the point that they actually have to pay, or like calculate this stuff, is not having all farmers and all farming businesses throughout the whole entire New Zealand on payment and calculating that all by one specific due date, because different farming systems have different year end dates around financials and things too. So being able to customise that from a farming perspective would be really, really beneficial because [...] from a farmer's perspective and thinking about the trusted team that supports that farming business [...] coming in from outside[...] helping the farmers get that across the line, then it spreads that workload throughout the year too. [...] The dairy guys all ask for the year-ends done in June, which is fine. But within Canterbury and ECAN with the nutrient budgeting perspective, it's all down to three months, and it's a lot of work for the guys supporting those businesses.”

“... the integrated farm plans have been lurking in the background for a while now. And I know the Minister's very keen to push those along. And I think farmers fundamentally want to see that happen, too... that there's a lot going on in the agricultural space, from a reporting and auditing standpoint, NPSEs and all that sort of thing so I think the sooner that that programme can get kicked off, in which case farmers are doing, essentially one, one plan, one report, one level of auditing, that, ideally, would be one auditor not having five different ones trying to do all the different aspects. [...] I would certainly like the ability to tie it all in together and I think it'll help farmers wade through the piles of regulation that are coming, if that can be done successfully. And then then you're auditing one nitrogen figure for water quality and climate change in multiple purposes, rather than having multiple people come in and tell you "well, this rule tells you this, and this rule tells you this", and "you've got to give me your number", and "they've got to have that number". And, you know, I think everyone on this call knows that we report to so many different people and double data entry. And yeah, that's a lot of time consuming effort. And even from the administrator, like, as an administrator it'd be a hell of a lot easier if we could start linking some of this together, get the systems to talk to each other. And it might not, might not start out that way. But I think that's got to be the goal, to make it a whole lot easier from auditing and reporting, if we can.”

“If we are having a mandated catchment plan and a farm plan, that's great because it'll tie us all together. With the catchment plan obviously, we have opportunities for catchment groups. Farmers could actually share in their collective sort of sense. Some of the wins and gains that one may achieve with sequestration, of which others may not be able to undertake on their own properties.”

## Theme 4: Farmers leading with good practice

Many farmers spoke about what the sector is already doing to improve efficiency and reduce environmental impacts, including reducing emissions. Some spoke about their pride in New Zealand's innovative and environmentally conscious approach to farming.

This theme included two main sub-themes:

- the commonality of good practice amongst farmers, and
- the degree of hope and/or expectation about technological and scientific solutions to reducing emissions.

This theme overlapped significantly with the farmers' and farms' capacity theme in Capacity and Capability (Theme 1), and with Pathways forward (Theme 7).

### Farmers leading with good practice: *We're already doing it*

- There was a general feeling that the farmers who show up to these kinds of hui are by definition more engaged, more active and thinking ahead than the average.
- Amongst this group there were strong statements about farmers already being innovative and using the best practices, sometimes to boost profitability and sometimes in defiance of profitability.
- Omnipresent in this theme was a sense of pride in New Zealand's lack of direct subsidies and participants' sense of the New Zealand style, ethos, culture of farming – “the way we do things” – and how this may be amenable to, or discordant with, the demands of emissions reductions and/or an emissions pricing scheme.
- See also Theme 1: Capability and Capacity.

“And we talk about GMP as sort of a term that gets bandied around and “good management practice”. I believe in this space we should be at BMP. We should be getting rewarded for our emissions reductions. And if we can recycle some of the money back to those early adopters and the people that make changes and do the right things [...] actually the early adopters, and the innovators and smart people, which are probably the people that are sitting on this call, are the ones that are actually already on the journey, and down the track of it. So they're going to have more incremental changes, rather than massive changes.”

“I think one thing that we're all saying is to survive in farming these days we've had to become really, really efficient producers. And so you know, whether that's fertiliser or the stock we run or, you know, we're being – the last 2030 years, that's what we've been doing is getting efficiencies in our system. [...] I think there's probably something that the government might have missed [...] farming in New Zealand – the reason we're some of the best farms in the world, is because we don't have subsidies, and the fact that we have to be very efficient producers. So as [other farmer's] saying, we are... There's not too much more that we can probably do.”

“But arguably, if you look forward, we are likely to lose our spot if we do nothing, lose our spot as being the most carbon efficient farmers in the world, people will pass us pretty quickly. So there's probably a good reason amongst farmers to do this, regardless of pricing. Because we are quite proud of that position.”

"In the arable, like doing your cropping, we direct drill now. I mean, that's changed in the last, even like ten years. Rather than doing your whole plough it up then disc it, then... you know, you used to go over your paddock that many times before you actually planted. Now it's just one pass and done. Well, that's a huge decrease in our emissions for a start. Yet, I don't know, I think they seem to have forgotten that we have come a long way in they've started the measurement from, like, \*now\* and suddenly, we have to alter it rather than looking at from in the past, on how far we've actually come. And our country. Yeah, overall, we were not really that bad!"

"I think it's a marketing opportunity in time, if we can prove our supply chain to be carbon positive, not just carbon neutral. But it's not very easy, and there's a lot of greenwashing that goes on around the place, and it's a real thing too.

The Aussies are rife at it at the moment. It's not quite as straightforward as just reducing stock, because we only have to make more with [...] that means the stock we have left have to be more profitable, our cost structures need to be lower. And none of us want to go the way of what Northern European farmers have got where they're basically gotten smaller and smaller and smaller, and really struggle to be economically viable. It's not going to be good for anybody there."

## Farmers leading with good practice: *Hope and expectation*

- Farmers broadly shared an optimistic view that tech solutions are coming, although their expectations and awareness of what these might be varied greatly.
- Some farmers clearly had deep knowledge of particular solutions and expressed confidence in those solutions' potential, while others knew much less about the details but nonetheless felt confident that science would make a meaningful difference. For more detail, see Pathways forward (Theme 6) and Capability and Capacity (Theme 1).
- Just one participant expressed scepticism about the science system.

"And there's a new company, I can't share the name of them, but I've always thought there was no silver bullet for methane reduction and agriculture in New Zealand, but they've developed one which is literally a silver bullet. It's a capsule that is injected in a drench into the ruminant's gut and it's got that [...] compound that is a slow release over six months that inhibits methanogenesis. So [...] I'd much rather that 120 million that was going towards that [than] a farm levy approach that's only going to give us 10% reduction by 2030. I'd much rather all that money went into R&D for methane reduction and sequestration methodologies rather than bureaucracy."

"But I guess the two things I'd like to see [recommended] from the Climate Commission on this part is firstly, a standardised method or methodology for asparagopsis. [...] And if you feed the seaweed to your stock, it will cut methane emission. [...] And the idea is that with point 5%, daily intake, so 0.5% of the stock's daily feed is going to come from the seaweed, you'll be able to cut methane emissions by a bit over 95%. So potentially super exciting, but you know, we're working on different ways that we can feed it out every day, be it in water troughs, in salt licks and pellets when we're break feeding in winter."

"One of the biggest challenges is actually the scientists, the biggest handbrake's the scientists because they actually want it to [be] 100% effective, or quantitative, before they'll actually pull the trigger that'll allow it to be used. And by the time they've actually got that, we're actually probably four or five years down the track, we've moved on, we're onto the next thing. So [...] understanding what [ready-to-use R&D] looks like, is a challenge."

"There's still a lot of development happening in the vaccine and feed space. So as more of that stuff comes to light, we'll want to get in to see whether it's worth putting into our farming system."

## Theme 5: Sequestration

Sequestration came up as a clear theme in all parts of the workshop. Many farmers felt strongly about the importance of capturing in the pricing system the broadest range of on-farm sequestration possible, while others raised concerns about the administrative burden and complexities of doing so.

Participants also often highlighted the varying ability across farm-types to use sequestration as a pathway to reduce liability within a pricing system – such as dairy farms versus sheep and beef farms versus arable farms, and extensive versus intensive farming.

The major theme of sequestration included four main sub-themes:

- what kind of plantings farmers thought should be counted as sources of sequestration, and how this would be done
- farmers' responses to this uncertainty
- concerns about the incentives to convert farming land to trees, and
- principled positions on sequestration and its effects on the system.

Uncertainty about what is being “counted” was a major theme in conversations about sequestration. The workshops occurred soon after an announcement about possible amendments to the treatment of pine plantations in the ETS.

Workshop participants were asked to comment specifically on sequestration as a prompt or follow-up question to the inquiry about pathways forward that they saw for their farms, and barriers or inducements that might make sequestration more or less appealing to pursue.

### Sequestration: *What to count and how*

- Participants spoke in detail about the importance of sequestration. Many farmers saw sequestration as their main option for responding to a price on emissions.
- There was a shared desire for certainty about detail and implementation – combined with a wide variety of views on the feasibility, fairness and effectiveness of ruling different kinds of vegetation in or out - particularly pre-existing vegetation.

“Having said that, we're sort of 25% bush on our farm. And based on I think it's Beef and Lamb's Greenhouse Gas calculator, we're not anywhere near carbon neutral, which is another terrifying aspect of a lot of this. So yeah, this may be slightly off topic, but my huge encouragement to people in the Climate Change Commission and people being able to advise government is to value a tree on the farm, where the emitting is happening.”

“And so the big challenge, I think? Natives is really cool. Some of the east coast of the country is very, very dry. And there aren't a lot of native tree species that will grow to five metres of height, so the ETS scenario. So then we need that scrub, scrubland type of recognition. I think it's beyond natives, I think it's the right plant in the right place. So there, you have to use a mix of exotics to get things that will survive in some environments.”

“I'm from coastal North Otago, and we're sheep and beef farmers. And so the property I'm talking about [...] has a large amount of native bush. So again, this is another opportunity. But

is it, because it's a leased property. And so there's a whole lot of constraints around lease blocks. And I think that needs to be thought about [...] only in private leases, but also in crown and pastoral lease situations, as there is a lot of native bush that doesn't count under the ETS and even under He Waka still isn't fenced. And often it's because it's not practical for it to be, like physically it can't be fenced.”]

“[I'm] really keen to see tussock acknowledged and non-woody vegetation. I'm a little bit personally sceptical on grass and soil, I think those methodologies are still five years away, but definitely keen to see tussock and non woody vegetation come through. So those two things.”

“Yeah, how are we counting the sequestration? You know, what have we actually got to sell? [...] we've got a lot of manuka, kanuka, and then a lot of[...] pre 1990 - so you're getting into all the complications around ETS. And, you know, I guess that's another step - Are we wanting to step this right outside the ETS and start a new sort of bureaucracy or whatever, in terms of how we account for farm sequestration? And I think we've talked about it down to tussock [...] into grass, too, in our last breakout.”

“I do think, you know, in terms of, you know, if we're counting every fart and burp out of the livestock, you know, every tiny bit of sequestration, whether it's tussock, whether it's whatever, no matter how small, I think, you know, that has to be accounted for. We've just got to find a way to do that, because I think that's the only fair way.”

“So the first thing I would look at in our business is sequestration, we've got a lot of scattered bush around the farm. So it's a case of how we can manipulate those areas, maybe infill planting? Will they even be allowed in? If it's the ETS or not, is a big question, we've got quite a significant area of mature native bush, as well, so under the ETS that's not allowed either, which doesn't seem right.”

“I've got no detail about what our pathways are. But I've given it a lot of high-level thinking and my last resort is to reduce stock numbers, because that's how we generate revenue. So the first thing I would look at in our business is sequestration, we've got a lot of scattered bush around the farm. So it's a case of how we can manipulate those areas, maybe infill planting? Will they even be allowed in? If it's the ETS or not, is a big question, we've got quite a significant area of mature native bush, as well, so under the ETS that's not allowed either, which doesn't seem right. So that would be the first thing I would look at. And as those areas came in would be taken out of unproductive hill country or lower-productivity hill country, without much change in stocking rates.”

“If we are having a mandated catchment plan and a farm plan, that's great because it'll tie us all together. With the catchment plan obviously, we have opportunities for catchment groups. Farmers could actually share in their collective sort of sense, some of the wins and gains that one may achieve with sequestration, of which others may not be able to undertake on their own properties. On the sequestration front, we are trying to step away from the narrowness of the ETS, such that we do count for all sequestration. And so we must be broad to encompass more than what's presently being tabled. So that the likes of harakeke, tussock, perhaps those lesser woody vegetations will all have some form of sequestration of carbon included.”



## Sequestration: *Responding to uncertainty*

- In terms of sequestration, participants acknowledged that there was a lot we don't know about a farm-level emissions pricing scheme, with a nod to this aspect of the Climate Commission presentation at the beginning.
- Some participants highlighted the effect of this uncertainty in their perceptions of sequestration as an option for their farm and their ability to plan for it, combined with the pace of change that is being talked about.

"So a lot of people are just sitting on the fence at the moment [with the lack of integration of various requirements including for native vegetation]. What I've seen around the place, there's people who would actually like to do some quite good things around biodiversity and even carbon [...] and they're not doing anything because they're scared that they won't get recognised if they do them too early. And they want to understand what good looks like before they start spending money and spending time."

"We're in the foothills of mid Canterbury at an altitude of 500 metres above sea level. So we struggle to hit the minimum thresholds for the ETS with native vegetation. So that's a significant barrier to development of biodiversity. But if the government tweaks the ETS categories, potentially that would [...] accelerate or stop us going down the pathway of a production pine forest."

"We've looked to plant other areas on my farm, so I'm fortunate I have those areas. I don't call them unproductive because they are productive, but they are less productive and [...] steeper. Interestingly, one of the faces that I'm currently planting, the government paid my father to clear those faces in the 70s. And now they're paying us too. So you know, I often reflect on that, as are these policies going to stand the test of time? I think mostly they will, except for planting pines beyond a 30 year timeline. And this sequestering carbon, with pines, and saying leave them there for 80 or 90 years is an appalling way to look at this, a tree that beyond 30 to 40 years just doesn't work. So the pine is the perfect tree for silviculture and actually going through a rotation and harvesting. So I just think there needs to be a bit of thought around that before there's more harm done."

"We're short of labour around the country. And obviously, skills are important. We need to know what is required, and therefore what the next step is, is probably the biggest barrier that we face. It scares the living daylights out of us in some areas, in terms of what it could cost, and not knowing what will be recognised, what won't be recognised, how to get it recognised."

And I think a barrier for us is the lack of clarity - the legislation's coming so fast that - I can't have trees in the ground, to respond to, you know, the lack of detail behind the legislation, it's going to happen, and it's happening. But I don't know how to plan, you know, two or three or four years like I plan everything else on farm, it's years in advance. I'm sort of looking at December and going well, I guess I'll hopefully find out then and be able to plant trees the following winter."

## Sequestration: *Concern about conversions and consequences*

- Farmers shared a widespread concern about how incentives (which they framed as perverse) could lead to significant conversion of farming land to forestry, with consequences for the viability of farms and of rural communities.

- Many farmers expressed a strong aversion to planting farmland in exotic forest. Some raised concerns for rural communities, and for the future of the agriculture sector if that were to happen on a large scale. Some farmers also talked very candidly about their concerns for their future as farmers when emissions from agriculture are priced.

“The offsetting one, to me, it's a bit of a joke, you know. Like, I can buy some forestry land, I can play in the carbon market, I can actually buy enough carbon to actually see me out of my career and not have to worry about it, and I could probably make a profit out of it! But when you're playing a game, it's wrong. It's like Air New Zealand, they're buying trees to offset, and have they changed the number of planes they fly? No! Apart from COVID, no, they haven't.”

“And I think we're going to make some really short term decisions [with sequestration] that are going to have some real long term consequences – not just to communities in Taranaki catchment areas. So we've got a number of communities in eastern Taranaki, where farms are being bought up for forestry, and it has a real effect. It's pretty awful hearing people talk about it, but also the long term environmental view when trees are not going to be harvested and they're just left to fall down. I mean, it's just diabolical. And it can only have long term issues. So, you know, I'm really concerned about the short term answers that are coming up - we should be looking far longer term.”

“[...] applying that Māori lens, that land is not for sale. And given that the sequestration for all species is finite, it kind of takes it off the table for us, but it makes it a much more complex decision, especially in our capacity at Te Tumu Paeroa. Which again, probably makes us a bit different, and awkward. For us, it would be very hard to justify [to] the future owners or future Māori landowners that we planted this area in these trees.”

Not because it was probably what was best for that piece of land, but [that] we had to do it to offset things with our family business. And that's going to be a real obstacle for us in terms of mindset and how we navigate that. When I look at the farms that I'm involved with, and then acknowledging they're also on Māori land and the tree planting may or may not be on or off the table, the vegetation we tend to have on there is mature and its indigenous, it's not sequestering any more carbon, it's at a status quo position.”

“We joke about planting the whole farm in pine. I mean, that's what's being rewarded, but that to us is a really short term. And we are joking, but that seems like what you're being motivated to do at the moment but that our mind just completely changes the landscape. There's also going to be the issue associated with longer term with what happens to all of that wood and the land around it.”

## Sequestration: *Preferences*

- At times, participants expressed clear preferences for how implementation should take place. For example, many participants spoke about preferring to avoid the use of pines, including where this ran counter to financial incentives. Some participants also spoke about a preference for domestic investment in farms.
- A large proportion of participants expressed a strong preference for native trees, emphasising that they held this preference despite natives generating little income via carbon credits or otherwise.

"So I think the government needs to, as far as big picture, stop people coming into New Zealand [with] overseas money and putting trees in because it's just not helping, not helping our economy. We're dropping production."

"Like the possibility of, you know, clear felling any native bush, we have to plant pine trees, financially, a much better call for us. Obviously, I'm not going to do that, because that would be just environmental vandalism, but there's nothing stopping me from doing that. And that to me, a legislation or a system that pushes that, to me is just mind boggling to think that's what [...]we're encouraging people to do. And unfortunately there may be people entering the farming sector from - whether they're here or overseas - that don't have the sentiment of farming, haven't been brought up farming, and they don't have that moral compass or they don't value those established native trees like I think we all do. That sentiment does need to be protected I believe."

"I hate pines with a passion, so we certainly won't be planning any of those. I come from the east coast, Gisborne originally - although we're at the top of the South now - and I just think it's appalling that some places like Huriarua have gone into trees. I think that's just a bloody disaster."

"So, you know, [...] my goal on this farm is to be sustainable. And always, if I can, not buy in carbon credits, I want to do it all on this farm and not have to, you know, buy blocks to plant pines and all sorts of things, which is not in line with I think New Zealand farming."

"The biggest thing for me on a personal level is I really like native trees. And, but they're so expensive to plant and establish in any sort of density. And the ones that do tend to be around are mature, so there's no sequestration value there. So it really does point so strongly to that sort of exotic fast growing species, pine trees, redwoods, Douglas firs, whatever you choose, to offset which probably on a personal level goes against quite a few, sort of what feels good to me anyhow."

## Theme 6: Pathways forward

Discussion on this topic came from a specific question in the final session ("Looking to the wider system, what are the biggest barriers - or opportunities - that are influencing the pathways you see on your farm?"). It also featured in discussion around sequestration (see Theme 5 generally) and the bigger picture affecting farmer buy-in (see theme 7, Pathways forward).

There were three main sub-themes, explored in turn:

- A sense of New Zealand farmers generally having done everything they can reasonably be expected to do
- The acknowledgement that emissions pricing will see some farmers exit farming, and associated views on this
- Farmers seeing pathways forward that they could reasonably take, albeit (in some cases) with some sort of assistance and invariably with some pain.

## Pathways forward: *what else can we do?*

- Some farmers spoke about how they feel they have done everything they can, short of reducing production – which they generally found a difficult prospect to contemplate.
- This related to the views expressed in Farmers leading with good practice (Theme 4), and Capacity and capability (Theme 1).
- Common sentiments that came up around “what else can we do?” included:
  - NZ farmers are the most efficient worldwide
  - Fears for rural communities especially if labour / servicing needs drop
  - The uncertainty about a strong market developing for high-value products of which farmers could sell and produce less while maintaining income - and a strong desire for such a market to exist

“And I think, yep, so the data is being collected and the numbers are there, and it's just a tax, and are there any levers to pull to reduce it? They're *very* minimal that I can see. I think we're just gonna have to pay the tax or pay the number. And these little tweaks - I dunno, we can get an electric motorbike and a few little things, and you can try to do whatever. But you know, the big one's, probably methane. And what do you do to reduce that?! We're just waiting for the industry to come up with the silver bullet, I suppose, literally a bullet that you get and stick down a cow's throat that reduces their methane. So I just don't know any levers we've got to pull really, apart from little ones that do... effectively nothing.”

[Asked if there are things they can do to address fertiliser use] “No, unfortunately, there aren't. Our fertiliser use is very heavy. And for our trees and a lot of other products, you can't get the volume or the physical volume of alternatives to put in the same amount of nitrogen or whatever we need to do. You just can't physically transport that around, get hold of it, there isn't the production of it. We will be talking [...] hundreds and thousands of metric tonnes of any organically based fertiliser to put on and you know, and then to be used up. It just wouldn't work.”

“So as [other farmer's] saying, we are... there's not too much more that we can probably do. Most farmers have done an awful lot in the last 20 to 30 years, to improve their productivity and efficiency. And I guess you're asking us the question of, "well what more?", and we're starting to really scratch our heads at times as to what the next things are.”

“[...] we probably wouldn't be able to do much more on [replacing machinery with lower-emitting options]. We've already planted out what we call guts and gulleys. So that's sort of the steep areas that can feed a turkey. That's the way our fencer talks about it. We've been really lucky that we've had quite a bit of support from our local council to do that; we would not have been able to afford to do that ourselves. It's like \$150,000 worth. And so from here, we're sort of on our own. So yes, it's an option. But, you know, we expect to just factor in what everyone else is saying - the profitability - that would really hit our profitability to be able to do anything like that.”

“I think that the profile for sheep and beef farming [in Overseer] was really interesting. [...] How do you understand the basic sheep and beef farming model's profile? When you look at it, I think it's a really key question for you guys to answer because [...] I'm looking at my Overseer account at the moment: 97% of the emissions come from the livestock. So in terms of when I would jump ahead on reduction, really, the only emissions reduction scenario is to reduce livestock. [...] for the organic farm - it'd possibly be worse for them, because you've got nothing

to reject. If you're not putting any fertiliser on, [there's] almost nothing to reduce your emissions, so costs will be higher, because it's all your livestock."

And like [other farmer], we could drop production. But if we drop production, we probably have to lose our labour unit, which means we probably have to give up our lease, which then, you know, that has huge flow on effects socially and economically for the region and for the country, when people start having to do that. But the reality is, if we had to drop production, we don't become viable."

## Pathways forward: *for some, this will mean the end of farming*

- Many participants acknowledged that emissions pricing and its consequences will see some people exiting farming altogether.
- There was concern around how this would affect some more than others, in particular a new generation of farmers trying to get a foothold in life or others who have low equity in their farms.

"So what's left from that is a smaller farming footprint, which is less profitable than what we had before by quite some margin and an increasing margin. The option to intensify doesn't exist because it wouldn't be good for our hills. You wouldn't want to do that, really, you wouldn't want more stock on what is quite steep country. In terms of our options, really the only option we have is planting, and planting would mean that we had insufficient land left to be a viable farm. So I don't know what we would do. [...] So for people that are fairly early in the farming career, who are not inheriting the farm, [...] I don't see anybody coming after us, we barely got on the ladder as it was."

"Again, with the dairy farm side of things, the guys here are forward planning and try to keep on top of things as much as I can. So basically, they built up a really good breed of cattle which, in theory, they could reduce numbers if they need to, but they'll be more interested in doing plantings and other situations like that just to help offset the carbon side of things. And overall, they don't really want to de-stock because destocking means loss of production, which means loss of income, which, again, travels back.

However, with my parents' sheep farm, they're on the very, very small side of things. So destocking for them is probably not an option if they want to keep farming. Planting yeah, they can do a little bit of that. But again, it's not going to be huge amounts, and it's going to have to work out what's going to be best to plant to get the most benefits for that side of things. At this point in time without knowing, you know, the best option versus their carbon footprint and how much they've got to reduce it by, makes it a bit more difficult to work out what they should be doing, and whether it's time for them to get out of farming."

"...we've really got little, like, very little options apart from cutting stock if we actually want to lower emissions. And on the sequestration side, obviously, the logical answer people say is "plant trees". Two thirds of our property, or possibly a bit more is actually, is zoned as an Outstanding Landscape, so we can't plant pine trees. So we sort of wipe that option off the biggest chunk of it, which leaves native sequestration, which we do have quite a bit of native. And it's incredibly difficult to get recognised for, when you start talking the scrub. So yeah, trying to get some of it into the ETS, which is doing my head in at the moment. And the

sequestration proposed in He Waka's not really given me any joy either. It's quite limited, again, requires a lot of fence, tens of thousands of dollars' worth of fencing to get it recognised. So yeah, I really feel we're...here's not a clear pathway. I feel like I'm gonna get a big bill and nothing to do about it."

"So we have what would definitely be termed as a hill country and hard hill country property. It is our first farm, we are what you'd probably describe as at the lower end of the minimum viable size. So for us, this stuff comes at a really, really bad time. We haven't got big enough to relax. It's not a full labour unit property. For us to incur essentially another rates bill or what will become something probably quite substantial, more than that by 2030, it challenges our viability, quite frankly. It means probably moving off farm or earning income off farm. So I already do that to a certain extent. But not to the extent that would cover things like boarding school fees, which is what you incur when you live a long way from town. So, for us this is really big. [...] in reality, we would be better off to sell our farm to trees and to try and get the same size farm but better land because we can't afford to just cut some off and turn it into trees because those trees are only going to pay our emissions liability... In terms of our options, really the only option we have is planting, and planting would mean that we had insufficient land left to be a viable farm."

## Pathways forward: *Pathways in sight*

- Other farmers described a variety of pathways that they saw in rich detail. Most of these pathways included a focus on sequestration, with many farmers seeing that as their only option to reduce their liability under an emissions pricing scheme. However some do see the opportunity to add value and gain a market premium for their products.
- Some participants noted that there would likely be change to the relative attractiveness of the pathways they can currently see, and a preference for keeping options open until there was more clarity.
- There was a general sentiment, including amongst the more optimistic, that there was unlikely to be a pathway forward that was wholly pain-free.
- Many farmers noted that there are still significant gains that can be made in efficiency that are not yet being explored.
- Overall, there was a cautiously positive perspective across the workshops that there are pathways forward. However, as noted, the attendees of these workshops represent a sector of the farming community that's more engaged, more active and forward-thinking than the average.
- For more on pathways forward, see Farmers leading with good practice (Theme 4).

"From dairy – my perspective – a big one is around efficiency for us. So trying to improve cow genetics so that we can produce more per cow from less feed, essentially. That's probably the big kahuna for us. Then outside of that, is technology as it comes along, whatever that might be[...] something that's yet to be invented so it's just implementing the latest technologies, might be grass varieties or something like that, as it gets invented. And then yeah, we are Canterbury Plains, there's not a lot, it's certainly not going to grow native forests where we are. So we do have some pine trees, although I know we're not talking about barriers but I'm very loath to put those into some sort of pricing mechanism, because chances are, it's never going to come out of trees again. So there's a bit of a danger of locking up productive land. So yeah,

that's really my three to start with."

"Well, we've got some forestry blocks on farm. So I'm not 100 percent sure, I think one of them might be in the ETS, but the other ones not. So we will be looking at utilising trees. Within the wider business world, we've got quite an extensive hill country property as well. So probably look to some of the less intensive areas, look to plant some more trees potentially, or native and other options for reducing emissions on farm or you're already using plantain and fodder beet. So if we feed fodder beet as part of our winter rotation, and plantain goes in all our young grass mixes, starting to look and investigate the options of trying to select for low methane animals as well. It's not something we're doing yet, but probably something we will be looking into in the next three, four years. And too, we supply animals - well, we sell deer stags to other commercial farms around New Zealand. So hopefully then that will help bring some more awareness throughout the deer industry. Yeah, probably just the normal ones around natural fertiliser and making sure we're using that efficiently as well. So being able to calculate where we are at now and then run some scenarios and keep future proofing ourselves as we go along. Being able to just keep up to date with what's happening [...] we've still got levers to pull."

"So there are pathways for us, and I'm confident in our ability to see a way through it. I'm also a director of a lamb marketing company into North America. And so our supermarkets we deal with are quite expensive. So we'd just probably put the price up as well to help offset some of the stuff as well and make the customers pay because it's who theoretically should be paying. Obviously, you can't just keep doing that forever, because you burn off your customers. But like, I think in the last breaker room, [other farmer] was talking about Zespri and shipping. We've got all that sort of stuff. There's a lot of issues at play in the whole supply chain. On farm I do feel there's a way forward but it won't be without some sort of pain, which is not really what I'm looking forward to."

"[...]the data has got to be robust. [...] But now if we can reduce our nitrogen input for - by argument's sake for 30% - we've just reduced our nitrous oxide emissions by 30%. So it's a big trigger that we can pull because it's a long lived gas."

"I'm ready to interact and have been ready to interact with something on a farm level for a while. As soon as there was talking about pricing emissions and having to be accountable for this, my initial question was how, or what do I have to do to be sustainable in this? So what does my farm need to have in trees, how much X, Y and Z and that. I'm not interested in buying credits or seeking that; I can't afford to, and I don't think that's it's not the sort of sustainable New Zealand model of farming that I think we pride ourselves on."

"So we've got different gases but they're probably just as big a handbrake in different sectors and it's how do we actually do that? So yes, we're waiting for some things, but sometimes it's how do we use them and if you look at the dairy industry, we've been producing [...] calves out of our dairy herd until we just moved out of the dairy industry recently, we had no bobby calves, [...] so they were all fattened, finished and fattened. So you've actually now just cut down the footprint of, of some of the animals that are required. And so there's different things that we can do if we work together and I think we're very often in silos around these industries. So somehow we've got to be able to support each other there too."

"We are doing things that, we believe, help reduce our emissions, and make sense anyhow, at the moment. So you start with those things that you probably should do anyhow, and pricing would encourage you. But until you understand how granular the pricing is, some of the things

you might do it's hard to calculate their value."

"I couldn't buy trees at Christmas time to plant this year. Because they're not available. You know, the trees that I need to plant in my environment, and are available, they're available in two years time, not this year because they're all pre sold. So you know, that business can't gear up because in this particular instance it is immigration settings, New Zealand's immigration settings, it's stopping them from gearing up and dialling up their output. So you know, okay, so that applies to us as well for getting work done. We're short of labour around the country. And obviously, skills are important. We need to know what is required, and therefore what the next step is, is probably the biggest barrier that we face. It scares the living daylights out of us in some areas, in terms of what it could cost, and not knowing what will be recognised, what won't be recognised, how to get it recognised."

"Something I wanted to just comment on was, I think, what we need is as many tools in the toolbox as we can get. And then we need to give farmers individual ownership and accountability to find the values and drivers within that toolbox to, to, to design their own pathway. Because it's not going to be a one size fits all, there's not going to be one set of solutions that, you know, all sheep and beef farmers have to do X Y Z to reduce emissions, it's kind of each farmer has to be... There's going to be some people who are really into genetics, and there's gonna be some people that just don't get it, don't like, it doesn't float the boat, that's not why they got into farming, but they might really, really love planting tree blocks."

And some people are going to be comfortable to retire land from stock, you know, and just stock-exclude a certain proportion of farm and do whatever with it, you know, might set up a glamping business, you know. Everyone's drivers are so different. I think the biggest thing missing is just a list of opportunities. Do you know, like, What is that toolbox we can open up and select from within? And, you know, how many levers do we have to pull on individual farms to actually make that significant impact?"

"We're relatively low input, low stocking rate, really. So some of the options that others might be thinking about in terms of reducing stocking rates or using inputs are less of a possibility for us. It's one of the reasons why we've started looking at reforestation of some of the less useful chunks of the farm. So I think for us, our strategy is going to be offsetting a fair bit with trees."

"Do I see lots of options available for mitigation? Yeah, I think there's so many options that we haven't even scratched the surface of exploring all of them yet. I am a vet by profession as well, so I put that hat on and I see the animal health opportunities with regards to increasing efficiency and impact of parasite challenge on efficiency and also using low methane genetics as really cool opportunities for the sector."

"There's plenty still to be grasped to improve efficiency on farms. I work with a lot of farmers around even just simple things like body condition scoring, you know, ewe nutrition. And this is in the sheep context, ewe nutrition and body condition scoring. And I mean, drench resistance is a major threat to our industry, which reduces efficiency, because parasites are sucking up some of the energy. So if we could get on top of like, from a holistic point of view, if we look at efficiency as a sector and look at opportunities to improve our efficiency, then, theoretically, with efficiency being coupled to methane emission, that should improve our methane emissions, automatically, by improving efficiency."



# Theme 7: Farmer buy-in and how system characteristics affect it

Workshop participants spoke often about own sense of readiness for farm-level emissions pricing, either doing so directly (e.g. “I feel ready” or “nobody’s feeling very prepared”), or expressing their readiness through their discussions of other aspects such as the practicalities.

One important dimension of this was the farming community’s overall buy-in. Throughout all three sessions, workshop participants spoke to the question of farmer buy-in (acceptance of and willingness to actively support and participate) for reducing emissions generally, and also to the question of farmer buy-in to a farm-level pricing scheme to achieve that end.

There was a general view that without strong, widespread buy-in from the farming sector at large, both emissions reduction and the operation of a farm-level pricing scheme will be jeopardised.

This overall theme of buy-in included three main sub-themes:

- How farming and emissions are framed in the public discourse and how farmers feel they’re being portrayed,
- The extent to which farmers’ effort and/or progress is (or will be) noticed and/or rewarded, and
- A general “but what’s the point anyway” sentiment.

These were all closely intertwined in participants’ discourse, and had lots of crossover with the themes above. (See for example in Data-readiness (Theme 2): *How much more, and how fine do we go?*)

## Farmer buy-in: *Framing and portraying farmers and farm emissions in the public discourse*

- Participants spoke often about the impact of the framing that they see farming and farm emissions getting in the public discourse, and how it is a determinant of farmers’ willingness to ‘dig deep’ or ‘go the extra mile’.
- Participants spoke equally about two different sources of positivity in their attitudes:
  - the value of the market in acknowledging and rewarding high-quality products with a higher prices and top-shelf reputation, and
  - a New Zealand popular narrative and culture (presumably fostered through leaders’ public comments, official communications and promotions, and the mainstream media) that portrayed farmers and farming in a good light.
- Three additional dimensions to this sub-theme were:
  - A feeling that farmers are often villainised for simply “doing what the system told us”. There was a sense among some farmers that the framing of farming is far from positive or even neutral in the media and in popular narratives
  - The view that farming is or will soon be “taking one for the proverbial team”, or being asked to do more than other sectors, was voiced.

- A strong sense among participants of the importance of farmers' efforts being acknowledged and celebrated. Participants also spoke of a desire for common appreciation of the national or public good contribution of farming, and the importance of a strong and positive vision for the future of farming in New Zealand.

"Beyond a certain point we [farmers] are buying you time. As long as we continue to deny that narrative, even though we know that scientifically, it's true, the climate commission says it in its report, though not in such blatant terms, that we need these emissions from agriculture, [...] climate contributions to largely go, because the cuts in methane are going to buy time for the transport sector to reduce its emissions over longer periods. We know that that's true. But because it's not the narrative that we're allowed to use, farmers themselves don't even know that. They continue to feel as though they're the villains.

"And there's no way to not be the villain, at least as a farmer, in getting engagement on an issue as complex as this topic, which is hugely scientific, you need half a degree or three quarters of one at least just to be in these conversations.

"We need to give them some hope. If we can deliver that, frankly, agricultural goes as far as you like. We'll find ways to deliver anything you want. You offer, you'll obtain your classic kids. You tell them how they get five gold stars. And you know, most industries are no different. The problem is at the moment, we're not aiming for gold stars, it's for me not to get whacked with the roller. And that's very, very different. And I don't know why He Waka Eke Noa hasn't realised it. And the government certainly hasn't realised it, but that is easily the biggest, the biggest thing that can be changed."

"And [despite practice improvements in the last 20-30 years] they're kind of making it out that – it feels like it – that they're trying to make it out that we are, and that we've got all these big improvements that we need to do. And I don't think that's helping anyone. I think people have sort of... getting to the point where they've had enough. And they are, they're starting to think, "do I really want to keep farming?", because we're just feeling like we're being bullied and picked on."

"I think it at a high level, I think one of the biggest opportunities there is for the agriculture sector is that if we can make those reductions both on a per hectare basis, which is the expectation of society through through government, but also keep our emissions intensity per unit of product, whether it be beef, milk solids, or whatever, very low, it will keep us in the forefront of the market space.

"And I actually believe by about 2030, every single product the consumer picks up will have some form of carbon footprint on it, or something. So we need to see there is a compelling reason, a compelling opportunity that we have to keep moving and lead in that space. Because at the end of the day, we have to ship the stuff overseas.

"What do I see is the barrier, is actually shifting people's headspace. Doesn't matter what the problem is, the first barrier that you actually encounter is shifting people's headspace that the problem is actually solvable. And it's like going to the moon: nobody actually believed you could get to the moon until someone said "we actually can get there" even though they didn't know how. So headspace is always the biggest problem."

"If you say well, yeah, your farm property. If you can make some reductions or some sequestration at this level, you'll be warming neutral, for example, then that's something that's really powerful. try and bring all this back to the farm level. The, just a blunt industry[wide] thing, that creates helplessness - "what am I - what can - I can't fix this." But if it's "what can I do on my farm to be warming neutral?", then I think you can get a lot of buy-in and a lot of action. So there's, I don't feel that those... the way setting it up, the vision, is really inspiring people, personally."

"So the simplest thing they can do is acknowledge that there is a point where farming is not warming, and that the actions we take beyond it are in the national good, right?"

"That does amazing things for our ability to market products. It does amazing things for the industry's morale, we don't even need to know exactly where that point is, right now, we just need to acknowledge that there is a point beyond which we gain our social licence to exist again.

"So that is when I go, 'Ah, Jesus, I need to plant some land that I can't afford to plant'. I know what I'm doing that for. I know that my products that I sell, when we go to market them to Europe, we've got a product that's worth more than it was worth before. [...]At the moment, it's perceived very much as though it doesn't really matter how far we go, we will still be doing something bad. And therefore there's nowhere to get to. And I think that destination is hugely important."

"For myself, I want to know what is the horizon, what am I trying to aim for what is the future? So what is that vision of success? And I think of, you know, recent endeavours that the government have done - Fit For a Better World, led by the Primary Sector Council - so where is that flagship sort of as a beacon, a lighthouse, sort of giving me some real direction. And for myself, personally, I definitely do not want to have any siloed sort of goalposts or..."

"... what value are we trying to create for New Zealand, and it must be still largely about food production. Now, I won't beat on about, you know, the Paris Agreement and food production, but I think there's a fallacy, you know, that we're going to secure a future by locking up carbon in trees. There's a short term win, but it's not long term, so as I said earlier, the opportunity is in the integrated space, so that we have a better landscape that provides a win- win for all now and into the future."

"Innovation doesn't come from a place of threat, and defensiveness. So if we want innovation in our sector, we need to come from hope and optimism, and, you know, it might get a bit hippie woowoo here, but that's me, tough. But, you know, hope and inspiration and optimism as required to innovate, you cannot innovate in a defensive space. So we need to provide, you know, New Zealand farmers number eight mentality is world renowned for innovative skills. So we need to provide people with the hope, optimism and inspiration to actually be able to go forth and do what they do the best. So how we foster that environment to create that space is so important. It's so crucial from leadership within our sector."

## Farmer buy-in: *Noticing and rewarding effort and/or progress*

In discussing buy-in, participants also spoke about the importance of their effort or progress being recognised and rewarded.

- They spoke about how they will feel more motivated if the system (data, and incentives, and measurement) is granular enough to show the impact of their efforts and work, as well as the availability (or not) of pathways forward
- This discussion was closely intertwined to the questions of how granular to make data-capture and farm system modelling (see Data-readiness (Theme 2): on-farm operations).
- Participants also spoke about the need for certainty around how their efforts will be rewarded or acknowledged - even if they're not changing outcomes much and it's more about getting the market to pay for specific attributes in products

This was one of the areas where people saw merit in farm-level data for demonstrating, noticing or rewarding effort and progress - see Data-readiness (Theme 2).

"I think we've just done that, at the high level, one of the things we need to remember, it's the Ag sector that actually has to achieve the reductions as a total, it doesn't necessarily mean that every single farm has to achieve that actual target. So it's how do we use the resources to actually move those or incentivise those that can make the biggest biggest gains and those efficiencies? So it's how do we actually move the bell shaped curve rather than moving every individual and then so it's about applying the resources to move the curve, and in moving the individuals as opposed to every single individual[...] and this where as a sector we've got to stay high level and not get too bogged down to every single farm."

"But [...] if you have broad averaging, you don't get rewarded for what you either have done or about to do.

"If you were to say "10% [emissions reduction]", that might be achievable for a lot of farms, but then for other high performing farms, where people have put ideas into this, they're going to be able to afford a lot more. So would it be better to look at it as an individual sort of, overall, my farm needs to reduce by this much, I think I can actively physically pay this much to have, you know, this amount of production, because there are going to be some poor performing farms that will be able to dramatically change the way that they're acting and doing and getting everything sort of sorted for their farms, versus [...] somebody who is already do their absolute best, but they're having to hang out for other people who aren't doing as good as they could."

"There's obviously a marketing opportunity that I think farmers need to see what their price is - if you want to engage people they need to, we've been told so much in the dairy industry that we'll receive more for what we do, and there's already huge amounts done, but nobody can actually see what the difference is. So anyway, also there's this around the telling of a story. And I ask a lot of people, "how can we tell its story?" and never really get a straight answer to be fair."

"I just want to back up [other farmer]'s comments that getting recognition for work that you've done on your farm is really important. You know, a lot of farmers have done a lot of things and if they get rewarded, then you'll get buy-in into the system. But if you don't get rewarded, the farms will go 'well, I've done all this work and I've received nothing for it.' So I think that recognition is a key, a key component."

## Farmer buy-in: *What's the point, the big picture*

Some participants also shared a sense of 'What's the point?' in relation to their efforts in making changes to reduce farm emissions.

This theme came up in response to the question about where participants wanted to see change in the wider system (including internationally). But it also came up throughout the discussions. Participants sometimes noted that this may be out of scope for the conversation, but wanted to voice it anyway.

There was cross-over in this theme with sequestration, in particular, as farmers highlighted the distribution of offsetting.

Common sentiments that people raised in this respect included:

- Other sectors of wider New Zealand economy, should be targeted for reductions instead of farming, as those are emitting lots more and/or it'd be easier for them to change
- New Zealand makes a small total contribution to global emissions
- Other countries are continuing to subsidise agriculture, so New Zealand will be a "sucker" if (in behavioural economics terms) it cooperates while others are not contributing to reducing emissions.

"Yeah, and we all live in different environments. So we can't plant any trees, we farm every square inch of the farm, every square inch is irrigated. So you know, so our challenges are completely different. So and you know, the offsetting one, to me, it's a bit of a joke, you know, like, I can buy some forestry land, I can play in the carbon market, I can actually buy enough carbon to actually see me out on my career and not have to worry about it, and I could probably make a profit out of it! But when you're playing a game, it's wrong. It's like Air New Zealand, they're buying trees to offset, and have they changed the number of planes they fly? No! Apart from COVID, no, they haven't.

So we've got to have things that actually make a difference to the emissions intensity per kilogramme produced, but also the gross emissions, those two, they need to go hand in hand, environmental sustainability, as you said, absolutely needs to fit with our greenhouse gas production and our profitability as well. They're all the same, and we can't afford to drop our profitability. You know, we can maintain it, we can improve it, we do whatever, but we can't just have... having a tax, you know, like, I go back to the processor level, it's just a disaster. Because we - there is no incentive. For anyone."

"I really, really thank the Climate Commission for the story they're telling but [...] I hear all the time that farming is bad, but I don't hear about the contributions from all the other industries. Tourism, okay, I'm sick of hearing about Queenstown, thinking that the tourism world isn't going to change. Long travel, short stay, can't be part of our answer. And yet I hear nothing about that. [...] So while we're all up for change, I think what isn't being told is the other costs - transport, you know, Dunedin City's had a 40% increase in climate current carbon footprint in the last decade, that's terrible."

"I think it's important to figure out where it's driven by and then also, what they're really concerned about, because there's so many different steps in the supply chain. They're all

adding to climate change. So targeting a few specific areas that are really important, and looking into those rather than everything right down to your machinery, because you can get so picky about things. So I think, unless there's big areas that you can target, it's pretty hard to just say - because even your shipping, that's a huge, massive part for us at Zespri, and machinery, as well. So yeah, I think targeting the big areas for us in horticulture, which for us is shipping, and then seeing what we can do about that."

"If you do greenhouse gas emissions per kilo of product, we should just kill all of the sheep now. In the '80s they paid people \$1 a sheep to slaughter them in Southland, they're all buried at my farm. So I can show you the [...] ground they are in. We don't want to end up in that situation. Again, it's criminal, because if we had a system that subsidised and promoted the use of New Zealand woollen products in industrial applications around the world, we know the greenhouse gas footprint of those sheep would change dramatically. We'd bring in a whole lot less plastics, the sustainability of it is huge. And at the moment, it's a waste product that farmers are grizzling about - the cost of having to shear a sheep because there's no value at the other end. To me, that's a joke. And it's the biggest opportunity that sits in front of us and trying to recover what is truly valuable for the planet and little old New Zealand and not have us all be dairy, carbon, and feeding people."

"There is no point trying to fix the planet by changing emissions and New Zealand's dairy system or any kind of New Zealand farm system. We are a rounding error on the Southern Hemisphere's emissions. However, our customers who are riding bicycles in Paris and walking everywhere, and EV cars and changing the whole way they live have an expectation about our product and Nestlé have a zero strategy and we have to fit in or we will be selling milk at a discount supermarket somewhere less than the cost of local made stuff in India.

And so the ballgame isn't around, 'Will we get paid more?' There's a little bit more in it. It's, 'Will we still get paid the levels that we currently expect?' How does your farm survive on a \$4 price? And so like this, but that goes in the beef sector as well. Alliance has now got an email from Tesco saying pretty much exactly the same thing. And it's not shared to farmers and they don't understand the 'why', they don't understand why we're doing it."

## Other themes

These themes were prominent in the data body of workshop discussions, but didn't have the repeated attention of the others.

### Other themes: *Time horizons, choices now and options in future*

- One less prominent theme was the time horizon for change. This included comments about everything coming really fast, lack of certainty in quickly-formed policy and legislation, and a need for emissions to come down fast.
- This theme also included comments about the much longer time-frames for some of the things involved in responding to a price on emissions, such as planting trees, and concerns about committing to things now.
- The two participants in the workshops who spoke explicitly to Māori land and worldviews highlighted this point.

"It's been really interesting for me looking for a Māori land owning entity in that land is viewed forever. And so [...] using trees to sequester carbon or offset emissions, it really challenges that mindset. Because planting trees, be it native or pine, is most likely not the best long term land use for that piece of land. And by doing it now, in this generation, you're either incurring future generations with a liability if you clear that land, or you're locking that land use up so making it unavailable to other future owners. And that's why Ngā Whenua Rāhui has a timeframe on it, the protection is only for a set period of time, because otherwise it challenges that Māori world view of forever and essentially alienates the land. That's a really real challenge for us, especially in my operating entities."

"But actually, natives have a future [as a planting type]. To create an environment where we thought long term and not short term, and we're actually prepared to tolerate, like a slower sequestration, in order to have the right plants where we need them and for the longer term, and it's just moving away from this short term thinking. It seems to catch us out, we need to be thinking longer term, even if it sort of means we're just not sequestering as fast as we, you know, we should be. I just think there's something here. We just need to just take a breath and get it right. So the future is right."

"I think that we need to take a longer term view, I'm really concerned about this, everything comes back to this 2050. Then you were talking about a Māori worldview, and [2050] is certainly not the view that should be taken. And I think we're going to make some really short term decisions that are going to have some real long term consequences."

"Again, how will this policy stand the test of time, 30 years from now? Hand on heart, are these the best decisions we can be making? I just think we need to take a longer term view. And again, it's taken us 150 years to get here. And now we're looking around and going, actually, we've got some of this wrong. We need to be thinking about 150 years in regards to "this is what we want it to look like", and making those decisions now and trying to incentivize and work the economy so that we can make that work."

"I think being really open with the whole process is important and just being super upfront. Obviously, we've got to remain optimistic and all of this, but some farmers are going to lose

out significantly in the next couple of decades. And you know, that's the reality, that they're gonna have a really big cost which is their emissions and they're gonna have to change significantly. So I think being pretty open about that but also saying, 'Hey, there's big opportunities here for people who get ahead of this. Get ahead of this early.' Mostly for sheep and beef farmers to be honest, it's just a no brainer. It's a big opportunity for them to get a lot of money and credits on the voluntary market globally."

## Other themes: *Revenue being recycled into better practice*

- Most farmers shared the desire to see R&D and innovation receive money taken from farmers (e.g. through recycling funds from an emissions levy), and some made suggestions of how to structure the system for farmers to choose payment options for their sequestration credits.

"Looking at some of the models, I get frustrated by seeing some of the administration costs that are involved. So and... a tax for the sake of a tax doesn't achieve anything. So as long as the money that is being drawn into the system is going back into assisting with making changes on farm systems or improving, improving emissions, I guess, is the main thing. I just don't want to see a tax for the sake of a tax." [393]

"At some stage, you know, say we don't have a farm levy approach, if we go down the ETS route, which is what I'm advocating for, there'll be so many different options for farmers to receive payments for their credits. It could get super confusing, if you've got a sort of ETS, you could sell this voluntary credit to Silver Fern, etc, etc. So having some sort of standardised database for all the different ways farmers are eligible to get sequestration payments is going to be important. I mean, even when we have the farm levy approach, if that happened, then farmers will still want to get money for sequestration, and having a standardised database will probably be important. " [24]

"...I think the big barriers – I mean [...] there's two of them: One is the speed of the technologies, being developed to help us reduce emissions, is *way* too slow. And we need some serious investment in it. Look, government go and throw money at every other thing. If they put some serious money into the development of technologies and into research and development into the different things that we can do, we could go a whole lot faster." [273]



# Appendix: Climate Change Commission presentation

Material to set context at the beginning, and to introduce each session's question.

# The Climate Change Commission

## Farmer workshops

March 2022



## The context for our agriculture work

- The He Waka Eke Noa partnership is developing a proposal for an alternative scheme for pricing agricultural emissions outside of the NZ ETS (May 2022).
- The Government will make a decision about how agricultural emissions will be priced by 31 December 2022 – informed by the HWEN proposal, and the Commission’s advice.
- Agricultural emissions are legislated to enter the NZ ETS in 2025. Can be brought in sooner if HWEN partnership has made insufficient progress in preparing farmers for farm-level emissions pricing.

## The Commission's Agriculture Progress Assessment

- Assessment of progress towards farmers, and the sector, being ready for farm-level emissions pricing (June 2022)
- We are interested in understanding how ready farmers are for farm-level emissions pricing that is practical, effective and equitable.
- In this workshop we want to explore some of the issues around practicality – for example:
  - How ready you feel to interact with an emissions pricing scheme
  - What opportunities you see for reducing emissions on your farm
  - What you see as the biggest barriers to progress

## Emissions pricing

- Emissions pricing makes emitters feel the costs of the emissions their activities create, but allows them to reduce emissions in the way that best suits their business.
- There are different ways to price emissions. The way a system is designed will have an impact on what farmers can do to respond
  - Main pricing tool in Aotearoa to-date is the Emissions Trading Scheme (NZ ETS).
  - HWEN is developing proposal for pricing agricultural emissions outside the NZ ETS (levy)

### Key design elements of an emissions pricing mechanism

Point of obligation

How emissions are calculated

How emissions are priced

What assistance is given to participants

How sequestration is treated

How revenue from the system is used

## Focusing today's discussions

### Things we're taking as given:

- Biological emissions from agriculture need to be reduced to help meet emissions budgets and targets
- Emissions from agriculture will be priced from 2025 – in one form or another

### Not our focus today:

- Level of NZ's emissions reduction targets
- GHG metrics
- The specific details of different mitigation options and technologies
- The specific details of the He Waka Eke Noa Partnership proposals

## Session 1: Administration and regulatory activity



---

## Interacting with a farm level pricing system

- Farmers will need to collect data and report on their emissions
  - Collect farm-level data
  - Reporting on emissions
  - Farm planning to reduce emissions
  - Decide what action to take to reduce emissions and/or costs
- The Government will need to run and enforce the system
  - Administer the system
  - Monitor and enforce compliance
  - Integrate with other regulations – eg Freshwater and biodiversity

---

## Focus question for this session

**Given what we know needs to be part of a farm-level emissions pricing mechanism, how ready are you to interact with it?**

## Session 2: Actions on farm



### Focus questions for this session

1. What pathways do you see for reducing emissions on your farm, or removing carbon via trees? And why?
2. What other pathways could you take, and what would enable you to take them?

## Session 3: Making emissions pricing work for farmers



1

### Focus questions for this session

**Looking to the wider system, what are the biggest barriers - or opportunities - that are influencing the pathways you see on your farm?**