

**KELLOGG**  
RURAL LEADERSHIP  
PROGRAMME



**Supporting environmental  
sustainability in the red meat sector**

# Kellogg Rural Leadership Programme

## Course 39 2019

### Valerie Walpot

I wish to thank the Kellogg Programme Investing Partners for their continued support:



## Executive summary

With the New Zealand economy dependent on primary industries and export, New Zealanders concerned about the state of our natural environment, the ever-increasing focus on climate change, global consumers' changing expectations and disruptive technologies challenging our existing systems and processes; significant questions for the primary industries rise.

Are our land-based farm systems fit for purpose and do our practices have a sustainable future? How can we create economic value without destroying what we value environmentally?

The primary industries are under a lot of pressure to address managing the environment and the recently proposed Fresh water package raises the discussion on how our farmers can adapt their systems to do so. So how are we, as an industry, supporting them?

The aim of this project was to investigate what support the red meat industry offers its farmers while they are working towards achieving environmental sustainability for their farm businesses.

The method used to complete this project was a combination of literature review, data collection and qualitative research. Thematic analysis was used to bring the collected data together. It provided a framework and identified 3 main themes:

- CULTURE  
*The why: industry leadership and why would farmers change what they are doing?*
- CLARITY  
*The what: what do the farmers need to do and what is in it for them?*
- CAPABILITY  
*The how: now the farmers knows what they need to do, how can they do it?*

The main outcomes from the investigation are as follows:

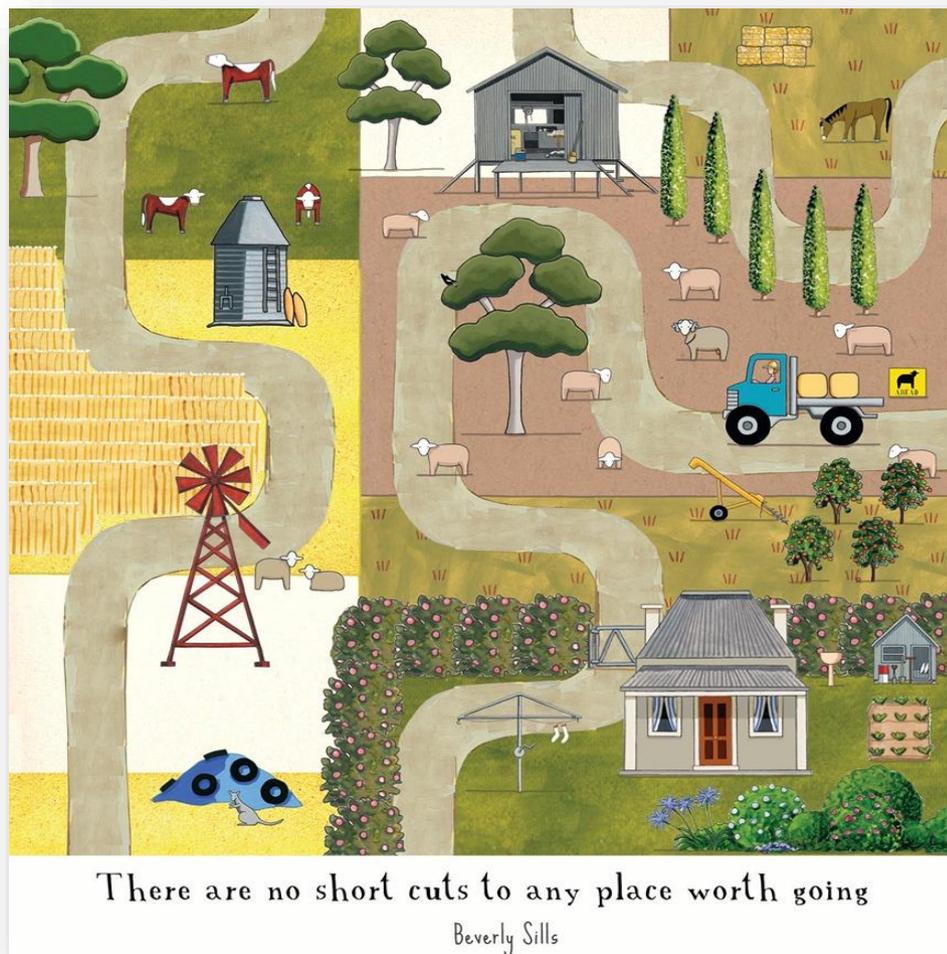
- To achieve environmental sustainability, we also need to maintain social and economic sustainability
- Change of behavior is required
- Farmers have different drivers than rural professionals
- There is a lack of leadership and collaboration
- There is a disconnect between policy makers and the service industry, mainly coming from a lack of farm systems knowledge
- The biggest challenge goes to regulation and capability of the sector

The biggest opportunity in achieving environmental sustainability lies in the how part but support for the farmer is often the most limiting step. Hence building farmers' and rural professionals' capability and therefore their confidence is key.

Key recommendations as a result from this project are as follows:

- 1) Strive for clear regulation
- 2) Set SMART goals
- 3) Design a framework for pathways to environmental sustainability
- 4) Communicate actionable knowledge
- 5) Create engagement, commitment and collaboration in stakeholders
- 6) Follow up on completion and success
- 7) Ensure repeatability for each step of the process

Leadership that supports collaboration between farmers, scientists, industry professionals and organisations is going to be critical. The sector needs to have a structured approach, with systems and processes in place.



Source picture: Red Tractor Designs: [www.redtractor.com.au](http://www.redtractor.com.au)

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A special thank you...

- to Scott Champion, Lisa Rogers and Anne Hindson for taking us on this special journey and creating a personal experience for each single one of us
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- to my team on farm that made it possible for me to take some time out to take on this project
- to my supportive partner James Perry and my parents, for always believing in me
- last but not least, to Patrick Aldwell and Melonie Sheppard for your ongoing help and encouragement, you're both legends and I am very fortunate to have had your support

It has been a privilege and I am grateful for the experience.

To my fellow Kelloggers... you're a marvelous group of people and I have huge respect for each single one of you.

## 1. Introduction

In 2018 the Ministry of Business Innovation and Employment released a report<sup>1</sup> identifying global trends likely to affect the future of food and farming and the implications for New Zealand's science and innovation system. The report identified three international trends:

- Enhanced environmental consciousness: environmental sustainability and measurement of effects
- New technological developments and transformational science predominantly in genomics and alternative proteins
- Changing consumer preferences: not only are consumers demanding evidence of ethical production, environmental effects and provenance and traceability, they also have more pervasive mediums through which they communicate

With the New Zealand economy dependent on primary industries and export, New Zealanders concerned about the state of our natural environment, the ever-increasing focus on climate change, global consumers' changing expectations and disruptive technologies challenging our existing systems and processes; the question rises.

Are our land-based farm systems fit for purpose in light of the future challenges?

*"The environment became one of the defining issues of the election. The government changed and the Coalition Government has set about implementing a policy agenda built on a distinctly different vision for a more socially-inclusive, environmentally sustainable New Zealand."*<sup>2</sup>

With agriculture reliant on the natural environment, primary industries and the concept of sustainability are (and always have been) an inseparable duo. The times are over that we can farm for only profit at the expense of a sustainable environment. The world challenges the primary industries with questions like; "How can we create economic value without destroying what we value environmentally?" and "Do our practices have a sustainable future?". To answer those questions and come up with solutions that can be successfully implemented in a commercial farm business, is highly dependent on the sectors capability and the policy makers approach.

There has been a huge shift in mindset in the last few years. We can say with pride that the primary sectors all stand for looking after our land and resources and protect them for the future generations. But at the same time, the primary industries are under a lot of pressure and one could even say 'under attack' and time pressure to address the issues around environmental sustainability.

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<sup>1</sup> MBIE, October 2018 'Current land based farming systems research and future challenges'

<sup>2</sup> KPMG Agribusiness Agenda 2018, 'Setting the scene for this year's Agenda'

As a farm manager, I have experienced big changes and shifts in my role and responsibilities in recent years. Our time spent on environmental management is rising, there is a lot of confusion and uncertainty with law reforms coming and we have a tsunami of compliance heading our way.

All of the above is extremely relevant to me and has a significant impact on how I can run a farm business and plan for its future.

So with even more skills required to manage the land and a significant change of legislation on its way, HOW are we as an industry supporting our farmers so they can achieve environmental sustainability so we don't set our sheep and beef industry up to fail?

## 2. Aims and objectives

The aim of this project is to investigate what type of support our farmers need while they are working towards achieving environmental sustainability for their farm businesses.

While as a sector, we still have work to do on the WHY and the WHAT, I believe our focus should be on the HOW. I would like to look into how the red meat industry is assisting our farmers to drive and support environmental sustainability. The intention of this being that the information coming out of this research can contribute to better insights into what can be done to improve the current systems in place.

The study question:

**What could support look like in driving environmental sustainability (ES) in the red meat sector?**

To undertake this project I put some thinking into what I would need to look into and what I would like the end product to be. Via mind mapping I identified the following steps:

1. To do a project around environmental sustainability, I would need to understand and therefore define. What does environmental sustainability stand for in the New Zealand red meat sector and who are the main players?
2. To understand farmers behaviour and needs
3. To understand rural professional's capability and views
4. Identify potential mismatches or what could be missing
5. To explore what success looks like

Identifying these steps helped me produce the questions for my questionnaires. Beside questionnaires, interviews with professionals from within the industry supplied me with more insight on the different views and approaches in our industry.

### 3. Literature review

#### 3.1 Defining environmental sustainability:

- Oxford Dictionary
  1. Sustainability: The ability to be maintained at a certain rate or level
  2. Environmental sustainability: Avoidance of the depletion of natural resources in order to maintain an ecological balance
- Wikipedia

Sustainable agriculture is farming in sustainable ways based on an understanding of ecosystem services, the study of relationships between the organisms and their environment. It is a long-term methodological structure that incorporates profit, environmental stewardship, fairness, health, business and familial aspects on a farm setting. It is defined by three integral aspects:

- Economic profit
- Environmental stewardship
- Social responsibility

Sustainability focuses on the business process and practice of a farm in general, rather than a specific product, unlike traditional approaches where the profit margin is the single major factor in assessing the bottom line of a business.



*“In its true sense, sustainability recognizes that environmental issues are interlinked with financial, social and ethical elements. It highlights the need for companies to capture, define, measure and report long term value through more than only a financial lens. Whilst New Zealand companies have been ‘slow to awaken to the true potential’ of embracing these wider concepts, the landscape is changing for the better. This change is being driven from various quarters including investor pressure, regulatory change and public policy.”<sup>3</sup>*

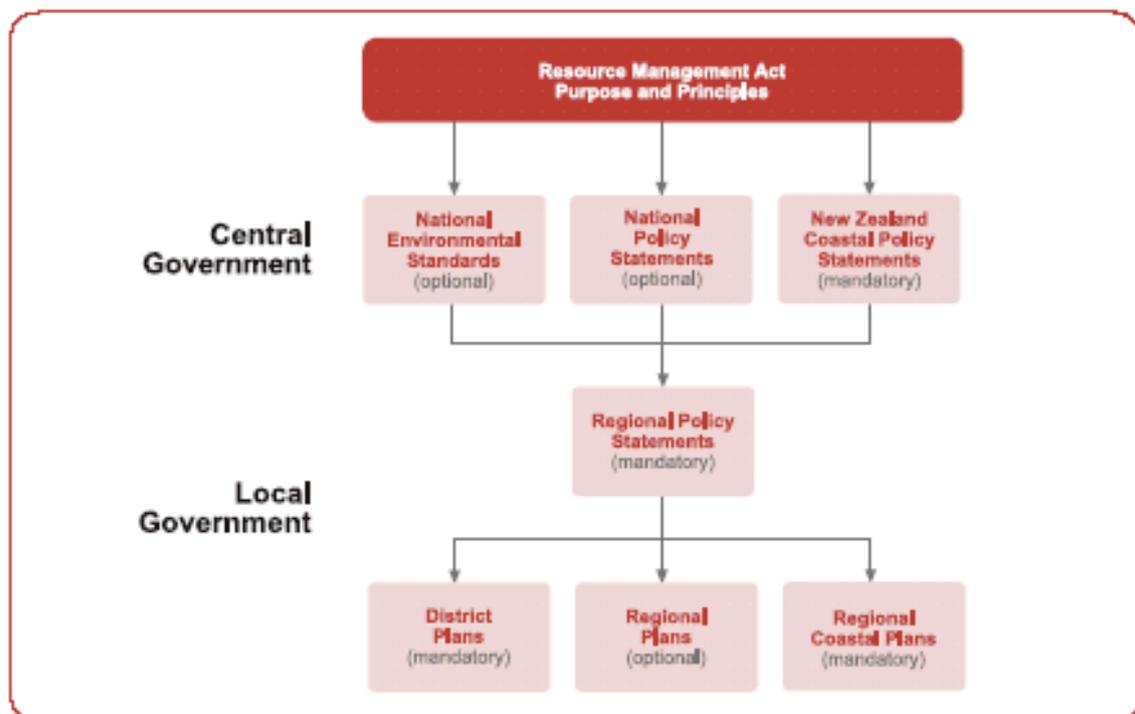
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<sup>3</sup> KPMG Agribusiness Agenda 2018, “Sustainably speaking’ by Erica Miles, Director KPMG

### 3.2 Environmental sustainability in the red meat sector

#### NEW ZEALAND GOVERNMENT

The **Resource Management Act 1991** (RMA) is the main piece of legislation that sets out how we, as a country, should manage our environment. It's based on the idea of the **sustainable management** of our resources and it encourages communities and individuals to plan for the future of our environment. District and regional plans are one of the most important aspects of the RMA. The RMA says that councils have to prepare plans to help them manage the environment in their area. It is these plans that tell you what you can or cannot do as of right. <sup>4</sup>



*Figure 1: the RMA's planning framework<sup>5</sup>*

<sup>4</sup> <https://www.mfe.govt.nz/node/16380>

<sup>5</sup> <https://www.oag.govt.nz/2005/water/part2.htm>

RED MEAT INDUSTRY ORGANISATIONS:

- **Beef and Lamb New Zealand (B+LNZ)**

Source: BLNZ Environment strategy and implementation plan 2018-2022

The natural environment is a complex system. So are people and communities. To be part of the solution, B+LNZ plans to take a ‘whole of system’ approach, by optimising each farm to function within the rhythms of the land, within the environment. There are two key components of the Environment Strategy that will enable this whole system approach. These are:

- **A new generation of tailored and farm specific plans to prioritise and target actions**
- **Connected people working together to prioritise and target collective actions at the catchment scale**

The vision: “World leading stewards of the natural environment and sustainable communities”

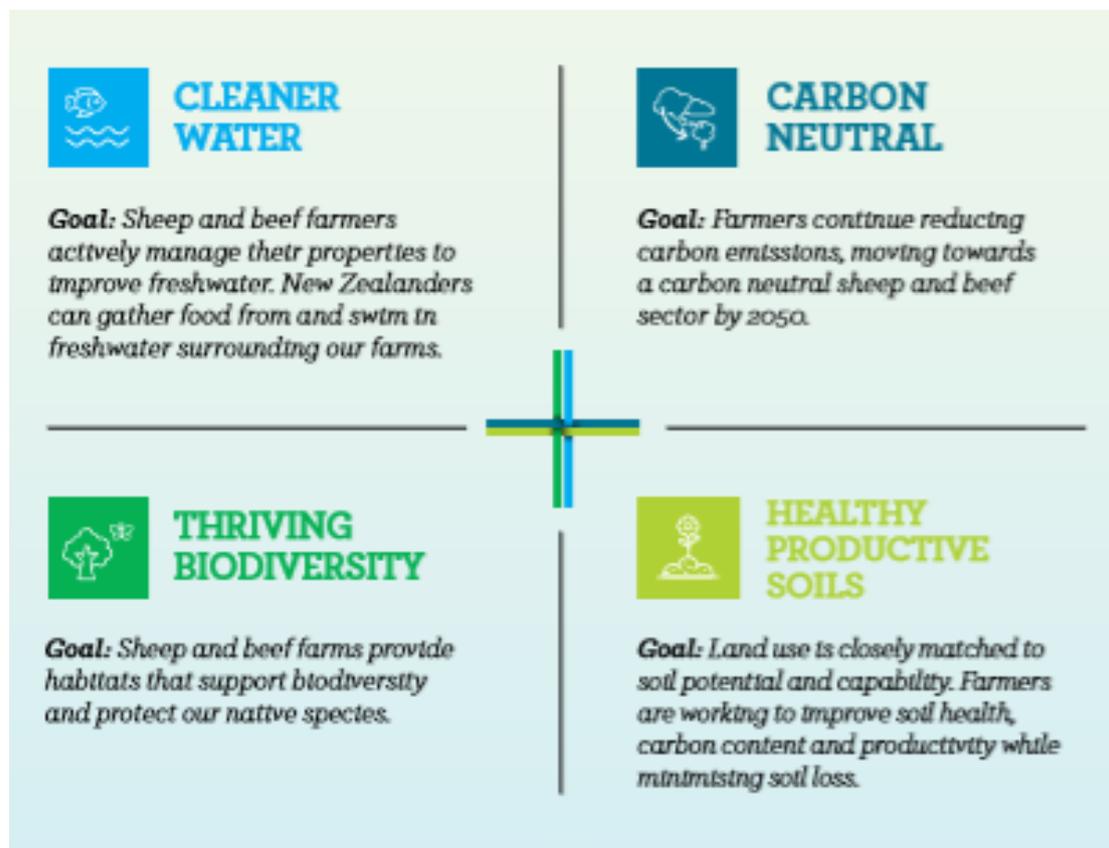


Figure 2: Beef and Lambs NZ Vision

- **Red Meat Profit Partnership (RMPP)**

In 2011, the Meat Industry Association and Beef + Lamb New Zealand published the Red Meat Sector Strategy. This set out to look at ways of increasing the profitability of the sector in a sustainable way and promoting re-investment in the industry. RMPP was born out of this strategy.

The Red Meat Sector Strategy identified three core themes that, if implemented, have the ability to improve the sector's profitability and productivity.

One of those themes was the sectors best practice:

- Improving productivity at all stages in the supply/value chain
- Enabling a 'single voice' to provide clear leadership
- Creating a strategy coordination group able to support sector initiatives
- Developing New Zealand's farming systems
- Selling the New Zealand story

This has led to the development of a Sustainable and Ethical Farm Assurance Programme (SENFAP) that is designed to provide the red meat sector along with farmers a framework for achieving, demonstrating and verifying sustainable and ethical farm practices as well as outcomes.

MEAT COMPANY:

- **Silver Fern Farms**

*Source: Silver Fern Farms Sustainability report*

Silver Fern Farms view is to create positive change for the environment, people, communities and the economic success of New Zealand. They call it their "Sustainable Chain of Care". It is a framework that shares their values, goals and plans and progress towards becoming a more sustainable Silver Fern Farms.

- The goal: to deliver sustainable profitability
- The framework:
  1. Engaged people, sustaining communities
  2. Sustainable future for farmers
  3. Food safety and quality
  4. Operational efficiency
  5. Wastewater management
  6. Animal treatment and welfare
  7. Market access
  8. Financial performance
  9. Each of the issues is linked to specific goals



*Figure 3: Silver Fern Farms Sustainable Chain of Care logo*

## COMMUNITY CATCHMENT GROUPS

A catchment group is a gathering of people, working together, who identify with a geographical area, usually based on a river or lake catchment. Catchment groups form to take actions to achieve a long-term vision based on a healthy environment (from water quality to biodiversity goals) and a thriving community. <sup>6</sup>

Examples are:

- Hurunui District Landcare Group (Canterbury)
- North Otago Land Management Group (Otago)
- Upper Waipoua Kaitiaki Group (Wairarapa)

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<sup>6</sup> Source: <https://beeflambnz.com/your-levies-work/community-catchment-group-programme>

## 4. Methodology

The method used to complete this project is a combination of literature review, data collection and qualitative research.

### 4.1 Data collection

Information was collected via interviews and questionnaires with both farmers (n= 11) and rural professionals (n=13) in the red meat industry.

The aim was to gather information from:

- Farmers from a range of different farm systems and locations
- a range of different types of rural professionals operating in the field working with farmers day to day

Questionnaires for both farmers as well as rural professionals were used to gain an understanding of opinions and motivations for their behaviour. It provided insight into the views about the challenges we are facing in our industry in support currently being provided and as a means to ask more questions to dive deeper into the issues.

The questions were developed with the intention to uncover potential mismatches between current support coming from the industry and/or rural professionals and the farmer's needs. The answers were then labelled and categorized to be able to summarize the results.

Besides the questionnaires, interviews with different organisations (n=12) were conducted to add another level of insight and perspective to the project.

The results of the data collection are reported in chapter 5 'Findings'.

## 4.2 Analysis

Qualitative research, a form of exploratory research, is used to gain an understanding of reasons, opinions and motivations. It provides insight into a problem or helps develop ideas. It is used to uncover trends in thoughts and opinions and dive deeper into the problem.<sup>7</sup>

As interviews and data collection were being completed, thematic analysis was determined to be a means to bring all the data collected together. Certain themes stood out in the process of data collection and they were used as a framework to write the discussion. The main themes identified were;

- The why: Culture  
→ industry leadership & why would a farmer change what he/she is doing
- The what: Clarity  
→ What does the farmer need to do and what is in it for him/her?
- The how: Capability  
→ Now they know why they want to change and what they need to do, how can they do it?

The outcomes of this analysis are reported in chapter 6 'Discussion'.

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<sup>7</sup> <https://www.snapsurveys.com/blog/qualitative-vs-quantitative-research/>

## 5. Findings

This chapter summarizes the data collection from the questionnaires with both farmers and rural professionals. The information collected has been categorised into the three main themes that were determined by the analysis: culture, clarity and capability. I averaged out the answers from each category to get the final score.

### 5.1 Culture

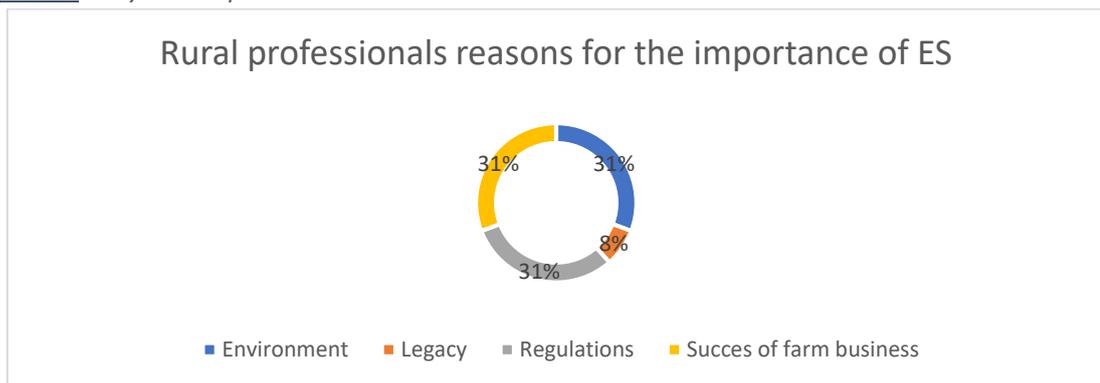
#### 5.1.1 The importance of environmental sustainability (ES)

##### Rural professionals:

Were asked to rate from one to ten (1 being low, 10 being high)

- how important ES with their clients was for them and why → Importance: 8.3
- how much responsibility they felt as a company to drive ES with their clients → Responsibility: 7.8

*Chart 1: Why is ES important?*



##### Farmers:

Were asked

- If they have a Farm Environmental Plan (FEP) in place and implement it on farm in their day to day management

5.1.1 FEP: 100% of farmers has a FEP

- What level of motivation they have to manage ES and why
  - ➔ Implementation of FEP: 73% of farmers implements the FEP into day to day management
  - ➔ Motivation: each farmer highly motivated

*Chart 2: Why is ES important?*



**So, what:**

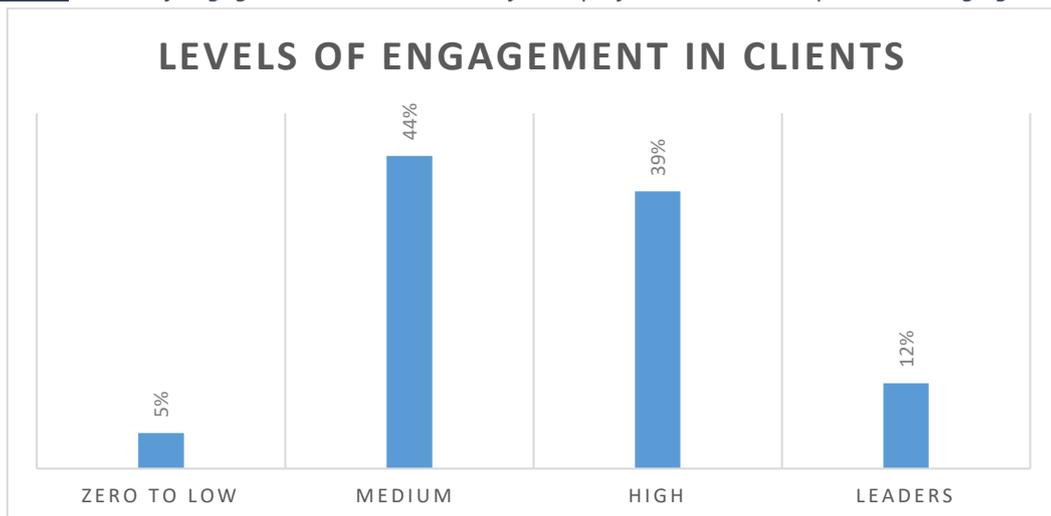
This information gives us some insight into the drivers of both groups' behavior. There is a high motivation to achieve ES and the biggest common reason is the environment. Interesting is the difference in the view on regulation.

**5.1.2 Levels of engagement**

Rural professionals were asked to indicate the levels of engagement of their clients:

- Zero to low = No FEP and not actively managing ES
- Medium = Have a FEP and doing the bare minimum to manage ES
- High = Have a FEP and implementing into their day to day management
- Leaders = Leaders or Innovators trying new things to improve their systems

*Chart 3: Levels of engagement with the clients of rural professionals with respect to managing ES*



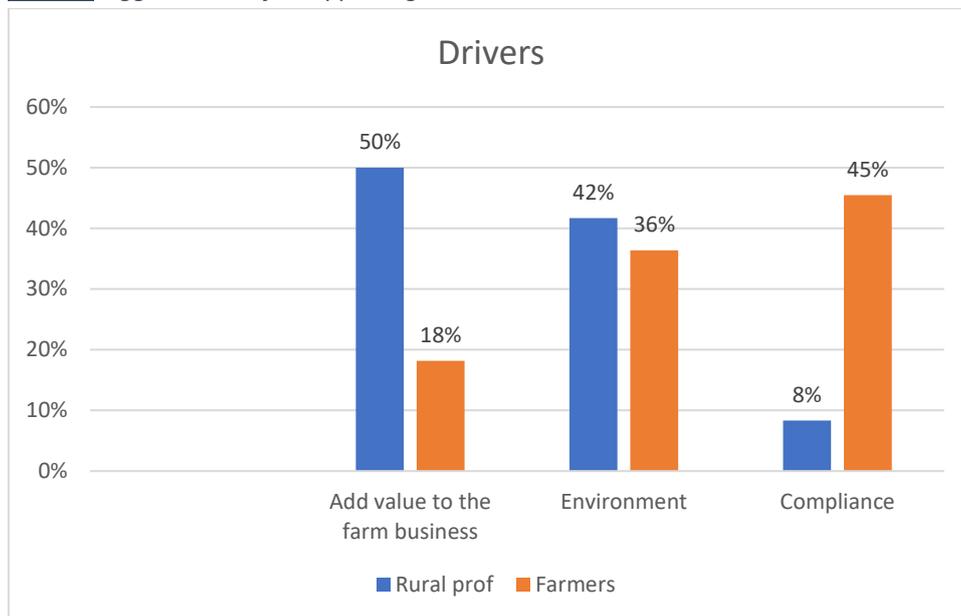
**So, what:**

This is an encouraging result and hopefully an ongoing trend. Work in progress for our industry as we hope to achieve farmer engagement rising in time with systems improving. Which brings us to the question, what drives that engagement?

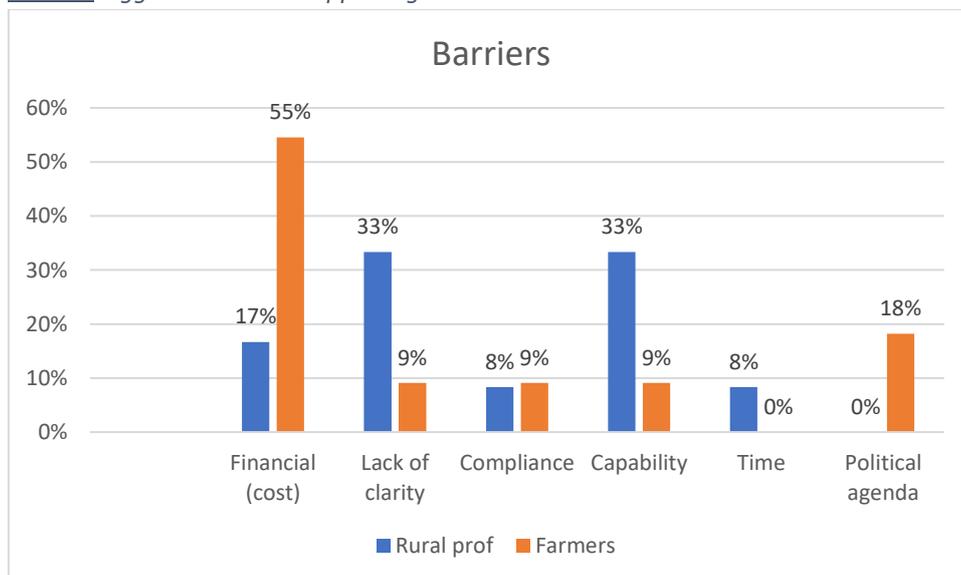
**5.1.3 Drivers and barriers**

Both rural professionals and farmers were asked what their biggest drivers and barriers were in terms of driving ES. The answers were categorized as follows:

*Chart 4: Biggest drivers for supporting ES*



*Chart 5: Biggest barriers in supporting ES*



**So, what:**

Interesting outcomes here: Compliance mainly driving farmers versus adding value to the farm business driving rural professionals. Again we see how environment is equally important to both farmers and rural professionals.

Farmers feel limited by very different factors than rural professionals. Not surprising cost being the biggest barrier for farmers versus lack of clarity and capability for the rural professionals.

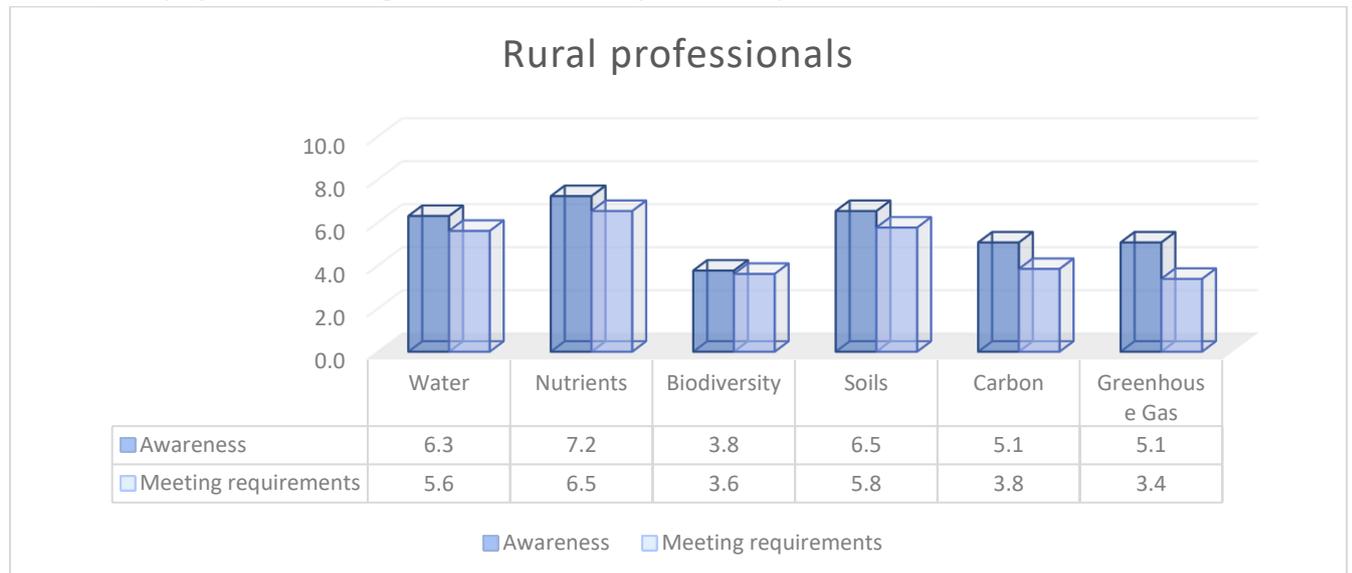
**5.2 Capability**

**5.2.1 Awareness and ability to manage the different elements of environmental sustainability**

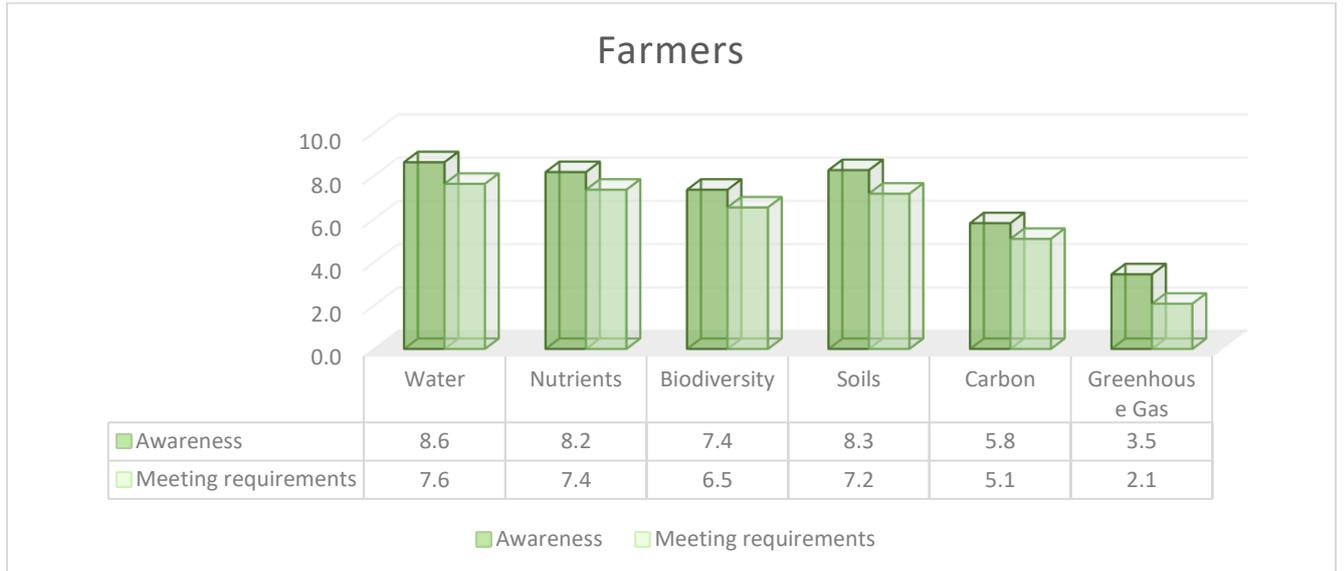
Both rural professionals and farmers were asked to indicate their level of

- Awareness of the obligations in the field of each different aspect of ES
- Ability to (help the farmer in case of the rural professional) meet the requirements of the obligation
- 0 being low, 10 being high

*Chart 6: Rural professionals' average awareness and ability to meet requirement in ES*



*Chart 7: Farmers average awareness and ability to meet requirements in ES*



**The so, what:**

Surprising outcomes here with farmers seeming more confident and feeling able to deal with the different aspects of environmental management than the rural professionals with the exception of the relative new aspect of greenhouse gasses.

**5.2.2 Tools**

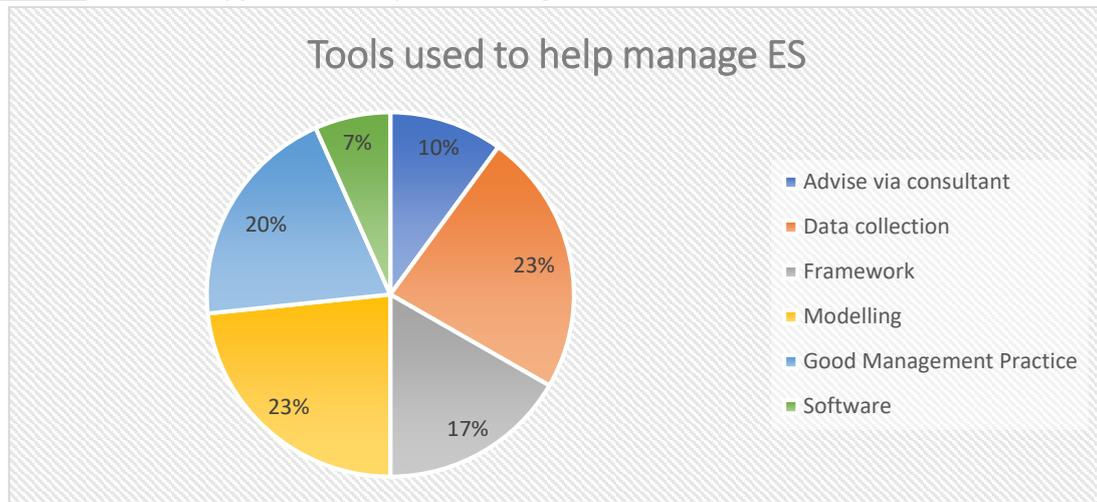
Farmers were asked what tools they use to help them manage the environment.

Examples of the different groups are:

- Advice via consultant: farm advisor, regional council, tree consultant
- Data collection: soil testing, bucket testing, water testing
- Framework: mapping, farm environmental plan (FEP)
- Modelling: Overseer, nutrient budget, feed budget
- Good Management Practice: grazing management, cultivation, fencing, irrigation techniques, proof of placement
- Software: FarmIQ, Smartglance

The results were grouped into types as follows:

*Chart 8: Tools used by farmers to help them manage ES*



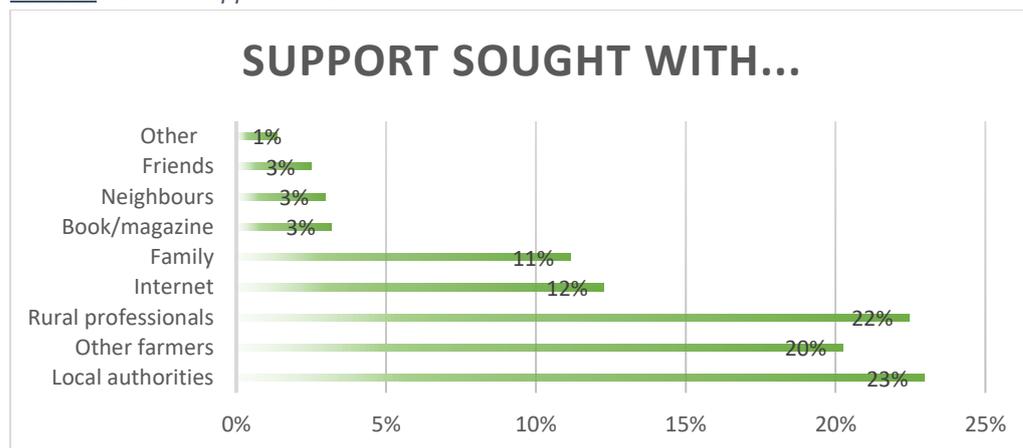
**The so, what:**

Based on this information, consultancy and IT are not relied on heavily by farmers.

**5.2.3 Support**

When farmers need help in the field of ES, who do they reach out to?

*Chart 9: Farmers support network*



**So, what:**

Rural professionals, other farmers and local authorities seem to play an even role in being a provider of support for farmers.

#### 5.2.4 What is going well, what is not going well?

Both rural professionals and farmers were asked to list what the sector is **doing well** to support farmers and what is **not going so well** to support farmers. Examples of the different groups are:

- Communication: ES gets talked about
- Knowledge: there is general learning and understanding about ES
- Culture: buy in from companies or farmers, will to change in farmers
- Extension: field days
- Systems: FEP framework, BLNZ resources, on farm testing
- Leadership: leadership shown by industry players
- Cost: cost of compliance
- Clarity: changing goal posts, alignment of industry bodies
- Incentives: carrot/stick system, linking of sustainability with market/customer needs
- Capability: farmers ability to manage their businesses
- Time: timeframes associated with achieving goals

*Chart 10: What is the sector doing well?*

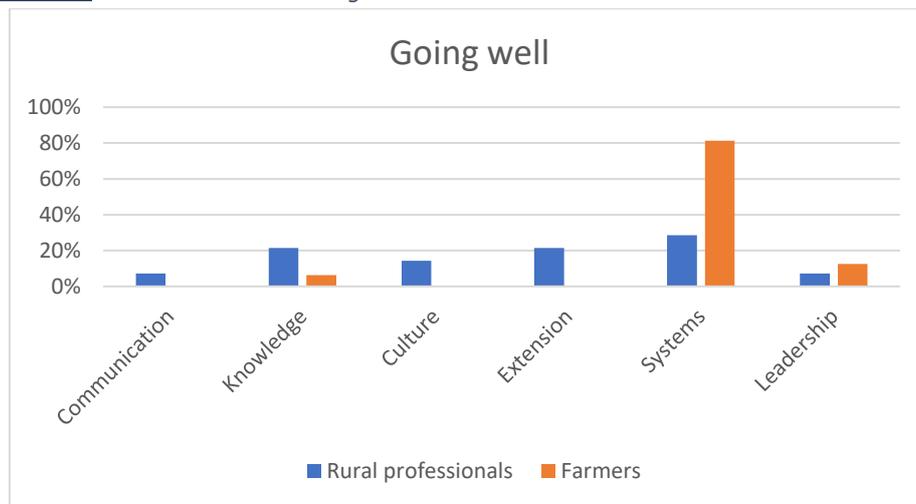
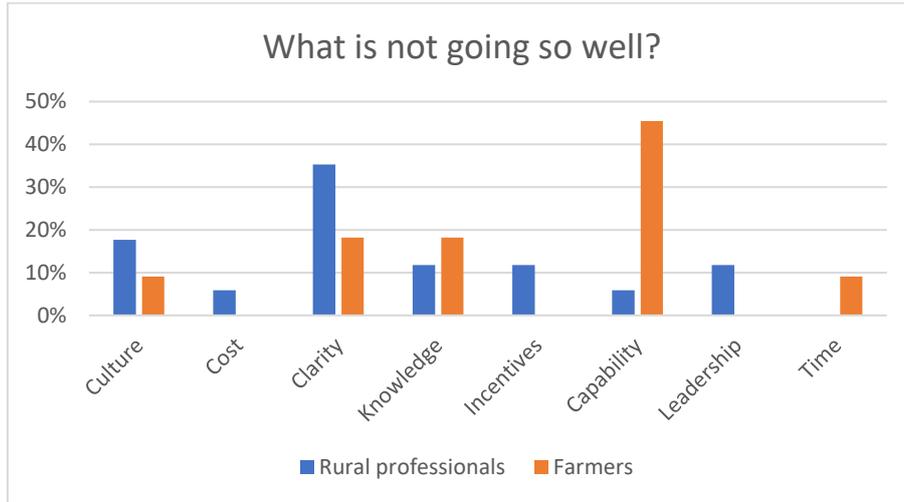


Chart 11: What is the sector not doing so well?



**So, what:**

Farmers are showing an appreciation for systems in place but not feeling happy about the sectors capability. Rural professionals have an even appreciation of what the sector is doing for farmers but are not convinced about clarity for the sector.

**5.3 Clarity**

**5.3.1 What should improve?**

Rural professionals were asked what farmers could do to make their job of supporting farmers in ES easier. Farmers were asked what they would like from the industry to help them drive environmental sustainability, short term and long-term. The answers were classed into categories and are as follows:

Chart 12: What do farmers need to work on?

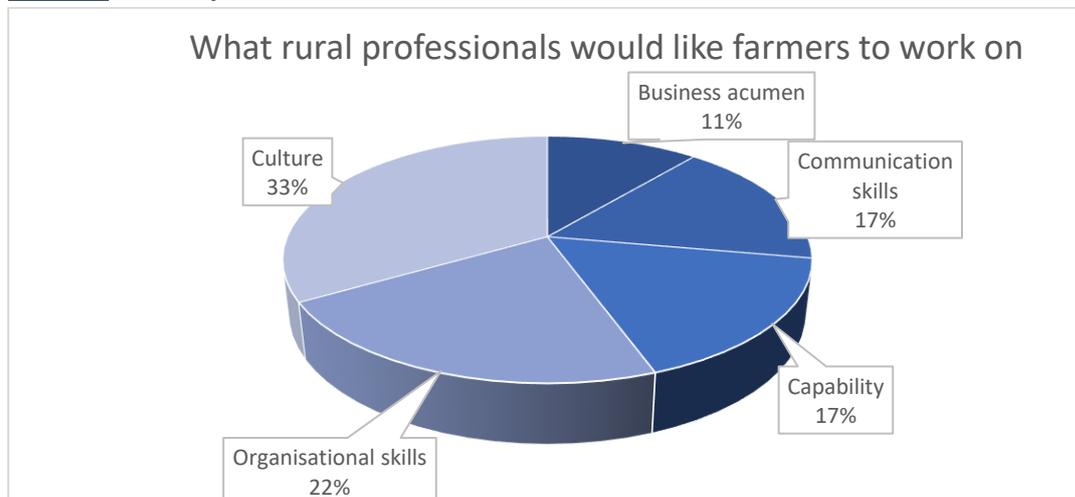
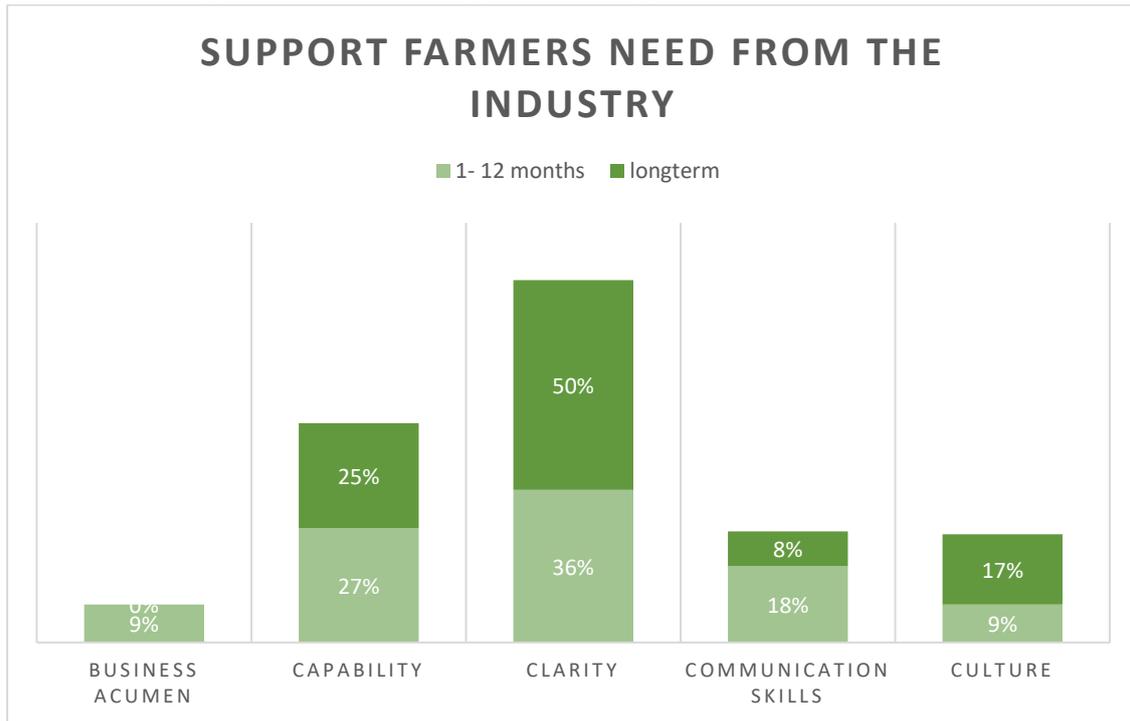


Chart 13: What support should the industry provide to help farmers drive ES?



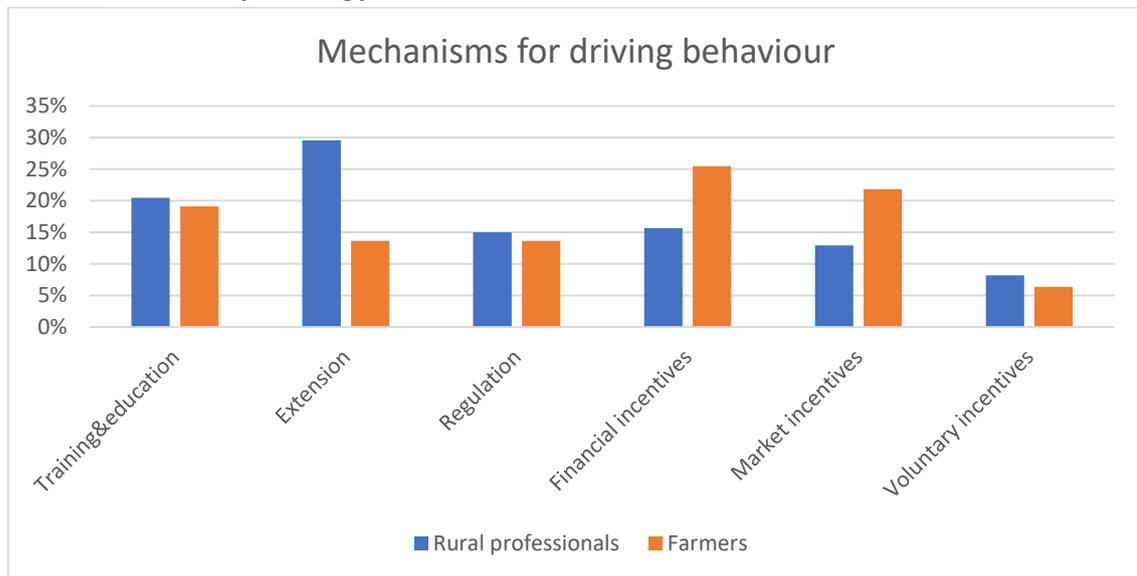
**So, what:**

Even though we've seen positive results in the beginning of this chapter around motivation and engagement, rural professionals still would like to see a big shift in the farmers culture. The farmer in their turn would like to see improvement mostly in the sectors clarity and capability. This lines up very well with rural professionals indicating clarity and capability as their biggest barriers earlier on.

### 5.3.2 Mechanisms

Rural professionals and farmers were asked to indicate what mechanisms they think should be used to drive farmer behaviour with respect to ES.

*Chart 14: Mechanisms for driving farmer behaviour*



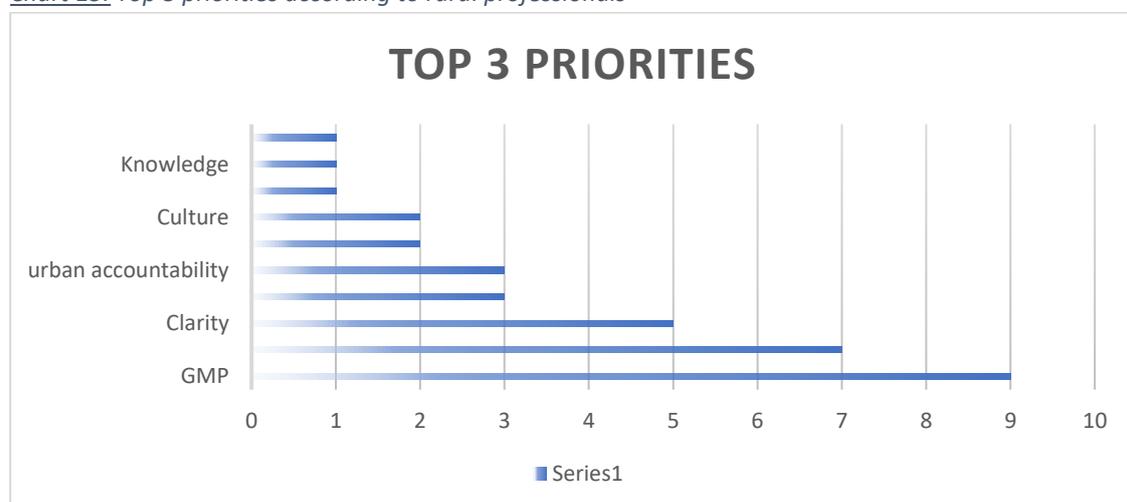
#### So, what:

We see similar opinions here for training & education and regulation. What stands out is that farmers do not believe in extension as much as the rural professionals do. The farmer much more prefers the financial and market incentives.

### 5.3.3 Priorities

Rural professionals were asked to list their top three priorities that need addressing in terms of driving ES. Answers were categorized and are as follows:

*Chart 15: Top 3 priorities according to rural professionals*



## 6 Discussion

### 6.1 Culture

Culture could be described as behaviours we accept.

What do we accept? What do we reward? Behaviours come from experiences in life and experiences in life come from decision making we do, mostly based on emotions. Culture is a progress, not something we can set in one moment.



The encouraging news out of all the information that has been collected, is that there is no disagreement, environmental sustainability is important to everyone interviewed. The results from 8.1 indicates both rural professionals as farmers as companies consider it **important**, feel **responsible** and **highly motivated** to get this right. Perceptions have changed and our businesses are shifting from a price to value driven economic model.

However, the **level of engagement** according to the rural professionals, is spread. Chart 3 in 8.2 confirms that the majority of their farmer clients are to be found in medium to high level of engagement.

An interesting concept to consider, is the following model around culture and value development. The results and opinions from the data collection, indicate that in general the majority of the sector finds itself somewhere in phase 2 and 3.

Steps towards the perfect level of 'maturity':

1. Phase 1 - Counterproductivity: Resistance
2. **Phase 2 - Public compliance: 'Have to' → NZ currently**
3. **Phase 3 - Private compliance: 'Want to' → NZ currently**
4. Phase 4 – Stewardship: responsible planning and management of resources
5. Phase 5 – Citizenship: responsible pro environmental behaviour

Adding further insight into where farmers sit in terms of achieving ES can be gathered from graph 4+5. The **biggest drivers and barriers** to engagement; these could be interpreted as another confirmation of those levels of maturity.

Farmers are mainly driven by compliance '*Have to*', while the rural professionals want to add value to the farm business '*Want to*', see it as an opportunity. Farmers seem to be limited mostly by cost, while rural professionals feel limited by their own capability. Both groups have equal views on looking after the environment as a driver and compliance as a barrier.

Based on all of the above, we can conclude that on average as a sector we are floating in phase 2 and 3 and thus, still have some growing to do as the ultimate goal is having the sector in Phase 5.

Questions and comments from respondents in terms of our current sectors culture include:

- How are we getting people to want to change and not bully them into it?
- Farmers are yet to see ES as an opportunity or a positive, instead of a compliance cost.
- Water quality is a community issue and needs all parties at the table.
- There seems to be no recognition for farmers that are doing a good job.
- What is the urban accountability?
- Companies need to be able to show farmers their own house is in order
- Public perception is doing damage, we are losing goodwill and engagement because farmers are getting defensive due to the anti farming behaviour from the general public.

## 6.2 Capability

Leadership and professional skills help businesses ahead. Knowing where they stand, what their status is and having successful resources gives businesses the power or ability to do something.

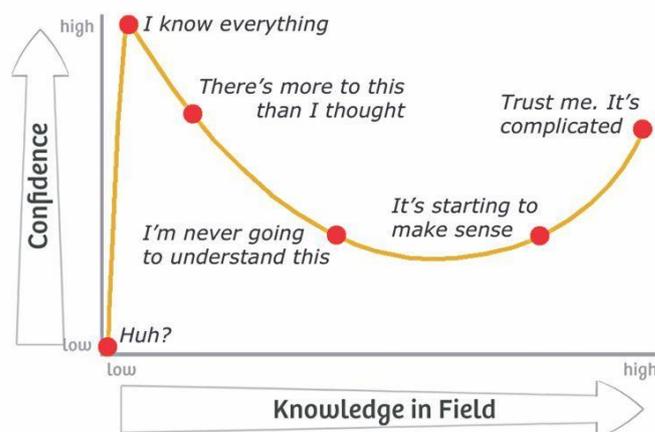
When we look into the results of chart 6 and chart 7 we see a difference in the level of **awareness and confidence in our sectors ability** to meet current environmental requirements. With the exception of Carbon and Green House Gasses, farmers report a higher level of awareness and ability to manage the different aspects in ES than rural professionals.



This is interesting and raises the question, 'Why is that?'. Is this simply a matter of the more we know, the more we realise we don't know? Are rural professionals actually more aware of requirements and therefore aware of their own limitations in each area? Rural professionals are working with a range of clients and so the size of the task may feel significantly bigger? Or do farmers feel more confident because they are handling the issues for their property and know better what they are dealing with?

In the field of psychology, the Dunning-Kruger effect is a cognitive bias in which people mistakenly assess their cognitive ability as greater than it is.

*Picture 1: Image of the Dunning-Kruger effect<sup>8</sup>*



To help them manage ES, the top three **tools** farmers use are (Chart 8)

- modeling
- data collection
- good management practice

*Digging a bit deeper into the concept of modelling, farmers were asked to rate their familiarity with our biggest national environmental management tool **Overseer** from 1 to 5. (Overseer is a nutrient budgeting and greenhouse gas reporting tool.)*

- 1 meaning, they don't know Overseer
- 5 meaning, they use Overseer as a tool in their farm business

*The average score was **3.2** which means **on average farmers are aware of its existence but have to use a professional to do the modeling work for them.***

*Considering seven regional councils use Overseer to help them manage water quality and it is one of the only tools we have to consistently measure nutrient leaching and GHG emissions, a lift in uptake and ability to use the tool would benefit the sector achieving its environmental goals.*

When farmers go looking for help and **support**, they tend to reach out mostly to local authorities, rural professionals and other farmers. (Chart 9)

When looking into **what is going well in the sector** (Chart 10+11) in terms of supporting farmers with ES, both rural professionals and farmers seem to agree on 'Systems' as their number one.

- Both groups: Systems 😊
- Rural professionals: Clarity 😞
- Farmers: Capability 😞

<sup>8</sup> The Daily Star, Judging yourself with the Dunning-Kruger effect, 19-09-2019  
<https://www.thedailystar.net/shout/health/news/judging-yourself-the-dunning-kruger-effect-1730974>

Questions and comments that have come from exploring the sectors capability to meet its environmental goals:

- There is a lack of industry alignment of what environmental sustainability means.
- We need people to help farmers know where to start and give ongoing support.
- There are lots of individual companies working on their own rather than working together.
- Farmers are lacking tools to help them manage ES.
- Why does the agricultural sector not have more clout?
- People in regional councils are lacking knowledge and experience.
- How does the support help farmers meet standards?
- What do farmers really need from the rural professionals?
- Is the role of the rural professional changing to a support and a conversation partner?
- Farmers are having to learn to live with more compliance and regulations. (overload?)
- Where is the money and the time for support going to come from?
- There is a lack of leadership and collaboration amongst sector organisations.

### 6.3 Clarity

Clarity is the quality or state of being clear. It gives a business a clear understanding of a purpose, a goal or a process.



What do we **need from each other in the red meat industry**? Rural professionals would like farmers to work on their culture and organizational skills. (Chart 12) Farmers are asking for clarity and capability. (Chart 13)

When exploring what **mechanisms** could be used **to drive farmer behaviour** (Chart 14); both groups have a similar view on the use role of 'Training & education', the amount of 'Regulation' and the level of 'Voluntary incentives'.

Opinions are quite different when it comes to 'Extension', 'Financial incentives' and 'Market incentives'. Farmers are hoping to be paid more for sustainably produced products whereas the industry is more of the belief that the cost of environmental sustainability is the price a business pays for 'staying in the game'.

So as a red meat industry, what role have our meat companies to play in supporting their farmers to achieve ES? Being part of the value chain, do they carry part of that responsibility?

According to rural professionals the **top 3 priorities** lie in Good Management Practice (GMP), Systems and Clarity.

With an overload of information and not one consistent message, the industry feels discomfort. We need to take away “the noise” and start focusing again on what we need to do and what we can control and how to go about it.

Questions and comments that have come out of this section:

- What is it that the consumer is demanding?
- Are farmers being rewarded for the efforts they are putting in?
- There is a lack of clear understanding around what sustainability means and what that looks like implemented into the farm business.
- Farmers are putting good work off because of the lack of clarity and struggles with compliance.
- How accurate is the information that regulations are based on?
- Are the regulators using science or prejudice to make decisions?
- How correct is the information that is being sent around?
- Goal posts have to stop moving. Rules and expectations are constantly changing.
- Good work should be rewarded with good prices.
- Government has no knowledge of the cost to achieve their aims.
- Patience is needed in this evolving process.
- Do the regulators fully understand the consequences of their decisions?
- What is the industry doing to ensure farmers are leading the change in ES?

Addressing the questions and comments that have come out of this research would be of value. Perhaps this could be a task for a newly established workgroup of farmers and rural professionals?

## 6.4 Vision

If the industry needs to get from point A to point B we need to know where we are now, what we are aiming for, in what timeframe, what we need to measure and where to get the support. I believe we can learn a lot from business planning and apply this to our challenge ahead in achieving environmental sustainability.

Business planning creates a picture of a future point and then works out how to get from where you are today to where you want to be. The components of business planning are the following:

- 1) This is a method used in goal setting and increases the chances of a goal being achieved.  
Setting goals = SMART goals =>achieving goals

**SMART** stands for

Specific

Measurable

Achievable

Realistic

Timely

- 2) Communication
- 3) Clarity
- 4) Commitment
- 5) Completion + success
- 6) Sustainability (financial/environmental/future)
- 7) Repeatability

Further to this discussion, could we explore what failure might look like? Rather than brainstorming on the success side, would it be valuable doing a pre-mortem exercise? This analysis technique is a strategy in which a project team imagines that a project has failed and then works backward to determine what potentially lead to the failure. This way the main threats and weaknesses can be identified, and management can reduce the chances of failure. It is an empowering approach as we can feel we've addressed problems before they occur.

So what does success look like? Let us dream big!

***Table 1: A definition of success***

| <b>LEADERSHIP</b>                       | <b>REGULATION</b>  | <b>CULTURE</b>                    | <b>CAPABILITY</b>        | <b>CLARITY</b>  |
|---|--------------------|-----------------------------------|--------------------------|---|
| Better synergies                        | One governing body | Licence to farm                   | An arsenal of tools      | Well defined national and regional guidelines and rules |
| Bigger clout for the primary industries | Clear regulation   | Farmer driven, input into systems | Improved Overseer system | 2 way communication with the end users                  |

|  |   |   |  |  |
|--|---|---|--|--|
| All stakeholders on same page                                | Carrot vs stick                           | Environmental stewardship   | Science and knowledge to understand our issues                         | A framework farmers can work in within their region  |
| Brave leaders to show the way                                | Well informed policy backed up by science | Recognition of biodiversity and the difference farmers are making | Access to best practice options and leading technology                 | Farmers understanding land use capability  |
| Recognition for the good work being done                     | One size does not fit all                 | Buy in from the whole industry                                    | Tailored advice free of charge   | Clear standards that align the needs of the customer via accreditation schemes with the needs of local community |
| No product taken from farmers that are not compliant         | Regulators work with farmers              | Urban accountability for its contribution                         | An app that has all the tabs on issues and outcomes                    | Consistent information and messages to farmers by support providers  |
| Understanding everyone's needs                               | Simple to implement                       | Cost of perception  | Farmers meeting environmental compliance while financially sustainable | No moving targets but not a historical plan either   |
| A clear learning and support pathway with maximum engagement | Supportive not policing                   |   | Farmers fully understand the environmental risks on their property     | One stop shop for support  |
| Providing solutions  |   |   | More people capable of supporting farmers with ES                      | Simple and an interface for all farm data  |
|  |   |   | On the ground support, plans tailored to each farm                     |  |
|  |   |   | Farm systems matched to land ability                                   |  |
|  |   |   | Skilled & trained support people                                       |  |

## 6.5 Personal experience

Going through the process of completing this project, has given me plenty of moments of reflection. Below I've listed some of them.

*Table 2: Quadrant of reflection*

|  |  |
|--|--|
| <p><b><u>What surprised me?</u></b></p> <p>Ever since I started working on this project, I started noticing different levels of optimism around the challenge of environmental sustainability that was related to the region. Digging deeper into this, there seems to be a link between the capability of the regional council and the farmers optimism.</p> <p>No matter how much I wanted to focus on the HOW, the WHY and the WHAT kept coming reappearing all along my project.</p> | <p><b><u>What interested me?</u></b></p> <p>An announcement from MPI (via their Facebook page on June 6, 2019) about their 'Extension Service Model' Initiative.</p> <p>How this project ran parallel to with what I have been experiencing in my own life as a farm manager.</p>  |
| <p><b><u>What do I agree with?</u></b></p> <p>We need more people in the 'do' category. Less talking, more doing!</p> <p>An article by Dave Lucock from the Agribusiness Group on November 1, 2019. "Are farm systems forgotten in the current regulatory climate?"</p> <p>A Kellogg project is like farming, the work never ends!</p>   | <p><b><u>What questions do I have?</u></b></p> <p>There seems to be a big challenge in the expectations around the timeframe the industry has to achieve results. How realistic is this? We know from experience with the Health and Safety culture for example how long that has taken to get traction.</p> <p>Who is going to carry the cost of the support the farmers need? How does that responsibility get shared appropriately between government, farmer and industry?</p> <p>How do we shield ourselves from negativity in an industry that is under constant scrutiny?</p> |

## 7 Conclusions

The thought process that goes behind this project:

- The WHY- What is the industry leadership like and why would farmers change what they are doing? → CULTURE
- The WHAT- To achieve the requirements, what do farmers need to do and what is in it for them? → CLARITY
- The HOW - Now the farmers know what they need to change and what they need to do, how can they do it? → CAPABILITY

### 7.1 Culture

Culture is set by the behaviour we accept and/or reward. It is a concept that takes time to progress.

The results from this project show us behavior change is required to achieve ES. There is still progress to be made in our sectors level of engagement and the biggest contrast is in what drives and limits farmers versus rural professionals. Currently the biggest drivers are the rule book and the cheque book!

Those behaviours are driven from experiences. Good leadership can unpick those experiences and understand where the behaviour came from. This way the right questions can be asked and a leader can do its job as an influencer.

### 7.2 Capability

Capability empowers businesses to be successful. We cannot influence policy making but we can influence our businesses.

The results from this project show us a contrast in optimism, ability and confidence in meeting the current environmental requirements. One of our most important national modelling tools needs a lift in uptake and farmer ability to use. For support farmers reach out mostly to local authorities, rural professionals and other farmers.

Farmers have a strong view on the systems that are working well for them whereas rural professionals have a more spread view over what is currently going well. The biggest contrast is that farmers mostly see capability as a downfall and rural professionals list clarity as their biggest disadvantage.

### **7.3 Clarity**

Clarity gives a business a clear understanding of a purpose, a goal or a process. Lack of clarity leads to a limbo.

The results from this project indicate a particular strong need from farmers for support in both capability and clarity in both the short term and long-term future. Rural professionals list good management practices, systems and clarity as their top three priorities.

Contrasting opinions are seen on which mechanisms could be used to drive farmer behaviour. Not surprisingly, farmers would like financial and market incentives to drive change whereas rural professionals believe in extension.

### **7.4 Summarized:**

- Sustainability has three pillars, social, economic and environmental, not one! You cannot sustain one without the others.
- Farmers have different drivers than rural professionals.
- Behaviour change is required.
- There seems to be a lack of leadership and collaboration.
- The biggest challenge goes to regulation and capability of the sector.
- To support environmental sustainability we need
  - o A delivery model
  - o A farm systems approach
  - o Tools
  - o People
  - o Ongoing Research & Development
- Regulate the end point: let farmers decide how they get there, have an outcome approach. This will be harder work and it needs patience but it will empower farmers. One size does not fit all!
- There is a disconnect with policy makers and the service industry, mainly coming from a lack of farm systems knowledge.

## 8 Recommendations

The biggest opportunity in achieving environmental sustainability lies in the HOW part but support is often the most limiting step. A human support network with farm system skills is missing but it would be unrealistic to expect that there are going to be thousands of people available to help all our farmers. Hence building farmer and rural professional's capability and therefore confidence is key.

**Leadership that supports collaboration between farmers, scientists, industry professionals and organisations is going to be critical.**

The sector needs to have a structured approach to driving environmental sustainability. The sector needs systems and processes.

- 1) Strive for clear policies and standardization of regulation fit for purpose
- 2) Set SMART goals, identify what needs to be achieved
- 3) Design a national framework for pathways to environmental sustainability
  - a. Centralized baselines
  - b. Specific for the regions
  - c. Step by step plan: if it is broken down into smaller parts, it becomes manageable (a decision tree comes to mind)
  - d. Not one size fits all
- 4) Communicate actionable knowledge to stakeholders and farmers
- 5) Influence stakeholders so it creates engagement, commitment and collaboration
  - a. Enable a change culture
  - b. Invest in people capability and R&D
  - c. Investigate across primary industries approach
  - d. Investigate a service model rebuild
- 6) Follow up on Completion + Success  
Investigate what farmers prefer and what situations they have learned from previously
- 7) Ensure repeatability for each step of the process

## 9 Next steps

- Exploration of other sectors:  
Alongside the focus on the red meat industry reaching out to other sectors in the primary industries to gain an understanding of what support mechanisms they use to drive environmental sustainability with their farmers.
- Conversation with the regulators: explore what is working and not working well for them
- Would love to explore setting up a RMPP action network group with both farmers and rural professionals to explore pathways to environmental sustainability. Ironically enough I was invited to join a similar initiative on October 31 in Christchurch.
- More reading material:
  - A book by Jess Berentson-Shaw titled 'Talking truth in a post-truth world'. It is a discussion on how we can get more traction on our evidence and science. It explores the science of communicating and presents innovative ways to talk effectively about contentious information.
  - A book by James Clear titled 'Atomic habits'. In this book, Clear reveals how minuscule changes can grow into such life-altering outcomes.

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## 11 Appendices

### 11.1 The rural professionals' questionnaire (n=13)

The companies associated with the rural professionals:

- AbacusBio
- AgriMagic
- Beef and Lamb NZ
- Farmlands
- PGG Wrightson
- Ravensdown
- Red Meat Profit Partnership
- Silver Fern Farms
- The Agribusiness Group

#### The questionnaire:

1. Details
  - a. Name + contact details
  - b. Would you be happy for me to contact you for a follow up conversation?
2. What company do you represent? Which sector?
3. On a scale from 1-10 (1 being low, 10 being high) how important is environmental sustainability with your clients for you? Why did you answer this?
4. What % of your clients have got a Farm Environmental Plan?
5. What % of your clients use Overseer?
6. Which aspects of environmental management can you support your clients in? Please complete the table.
  - Are you (as a business) assisting/supporting farmers managing this element: Yes, No or Not applicable?
  - Please list on a scale from 0-10 (0 being low and 10 being high) how capable are you in dealing with this subject?
    - a) Your awareness of the actual obligations
    - b) Your ability to help farmers meet the requirements of the obligation

| Aspect            | Yes/No/NA | a) Awareness | b) Meeting requirements |
|-------------------|-----------|--------------|-------------------------|
| Water             |           |              |                         |
| Nutrients         |           |              |                         |
| Biodiversity      |           |              |                         |
| Soils             |           |              |                         |
| Carbon            |           |              |                         |
| Greenhouse gasses |           |              |                         |

7. Below are levels of engagement in the field of managing the environment. Can you please indicate how much % of your clients are in each level.

- Zero to low engagement:  
*No FEP and not actively managing the environment*
- Medium engagement:  
*FEP and doing the bare minimum to manage environmental sustainability*
- High engagement:  
*FEP and implementing the FEP in their day to day management*
- Leaders in this field:  
*Leaders/innovators trying new things to improve their systems and always one step ahead*

8. What % of your total time with your client do you spend on environmental sustainability?
9. What does success in driving/supporting farmers and their environmental sustainability look like to you? Describe the ideal support system. (You can dream big)
10. Environmental sustainability in the red meat industry:
  - What is the sector doing well to support farmers?
  - What is not going so well?
  - List your top 3 priorities:
11. On a scale from 0-10 (0 being none to 10 being high) how much responsibility in helping farmers drive sustainability do you (as the company) feel you have?
12. In terms of a high level of your engagement in supporting farmers with driving environmental sustainability:
  - What is your biggest driver?
  - What is your biggest barrier?
13. What can farmers do for you right now to make your job easier?

## 11.2 The farmers' questionnaire (n=11)

### 1. Details

- a) Name + contact details
- b) Would you be happy for me to contact you for a follow up conversation?

### 2. What type of property do you run? (based on BLNZ farm classes) (FYI you can find the definitions on the last page)

|                               |  |
|-------------------------------|--|
| 1. SI High country            |  |
| 2. SI Hill country            |  |
| 3. NI Hard hill country       |  |
| 4. NI Hill country            |  |
| 5. NI Intensive finishing     |  |
| 6. SI Finishing breeding farm |  |
| 7. SI Intensive finishing     |  |
| 8. SI Mixed finishing         |  |

### 3. Have you got a Farm Environmental Plan (FEP) and if so, does it get implemented in your day to day management?

If you answered no, what are the barriers for doing so?

- FEP: Y/N

- Implementation: Y/N

- Why?

### 4. How familiar are you with Overseer?

|  |  |
|--|--|
| 1. I don't know Overseer   |  |
| 2. I am aware of its existence but have never used it  |  |
| 3. I am aware of its existence, but I let a rural professional do that work for our business |  |
| 4. I know Overseer and work alongside a rural professional to use it for our business        |  |
| 5. I use Overseer as a tool for (environmental) management in my business                    |  |

5. Aspects of environmental management: please complete the table below

- Are you actively managing this element: Yes, No or Not applicable
- List on a scale from 0-10 (0 being low and 10 being high) how confident are you in dealing with this subject?
  - a) Your awareness of the obligations
  - b) Your ability to meeting the requirements of the obligation

| Aspect            | Yes/No/NA | a) Awareness | b) Meeting requirements |
|-------------------|-----------|--------------|-------------------------|
| Water             |           |              |                         |
| Nutrients         |           |              |                         |
| Biodiversity      |           |              |                         |
| Soils             |           |              |                         |
| Carbon            |           |              |                         |
| Greenhouse gasses |           |              |                         |

6. When needing help in the field of environmental sustainability, who do you reach out to? Please specify who and % of support if and where you can.

|                     |  |
|---------------------|--|
| Family              |  |
| Friends             |  |
| Neighbours          |  |
| Other farmers       |  |
| Rural professionals |  |
| Local authorities   |  |
| Books               |  |
| Internet            |  |
| Other               |  |

7. Environmental sustainability:

- What tools do you currently use to help you manage?
- What is going well for you?
- What is not going so well for you?

8. What is your biggest frustration in the field of environmental sustainability?

9. How motivated are you to manage the environment?  
Why did you answer in that way?

10. In terms of meeting your current and future obligations:

- What is your biggest driver?
- What is your biggest barrier?

11. What support should the industry provide to help you with driving environmental sustainability

- in the next 12 months
- long term to continue supporting you

12. Rank how you would prefer to receive new information/learnings? (1 being most desirable)

|                         |  |
|-------------------------|--|
| Flyer                   |  |
| Mail                    |  |
| Email                   |  |
| Workshop/training       |  |
| Video                   |  |
| Podcast                 |  |
| Brochures               |  |
| Social media            |  |
| Website                 |  |
| Other (please describe) |  |

13. Describe your ideal support system (You can dream big!)

14. The price of staying in the game...

Indicate in % what mechanisms you think should be used to drive farmer behaviour with respect to environmental sustainability:

| Type   | % |
|--|---|
| Training & education                                       |   |
| Extension (field days, seminars, workshops, action groups) |   |
| Regulation   |   |
| Financial incentives                                       |   |
| Market incentives  |   |
| Voluntary incentives                                       |   |

15. List any questions that you currently have around managing environmental sustainability:

### **11.3 Interviews**

Organisations (n=12) interviewed were:

- National MP's
- AbacusBio
- Agrifirst
- AgriMagic
- DeerNZ
- Irricon NZ
- Lone Star Farms
- New Zealand Farm Environment Trust
- PGG Wrightson
- Rabobank
- Red Meat Profit Partnership
- Silver Fern Farms