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**Super heroes, not super humans.
Challenging assumptions and building capability to
support “good work, thriving people and great farming”**

By Lynsey Stratford

2021 Nuffield Scholar

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I wish to thank the below Investing Partners for their support over my scholarship period and beyond

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Executive Summary

Agriculture is the most dangerous occupation in New Zealand, the UK and Australia.

Despite the introduction of the Health and Safety at Work Act 2015 and a focus on improving health and safety, the rates of fatality and harm in NZ agriculture remain stubbornly high. This has negative impacts on the sector's productivity, profitability and sustainability. The consequences for farming families and communities are tragic.

This report explores the paradox:

***Farmers care about people and each other and
Their workplaces kill, hurt or harm too many people.***

The report draws on semi structured interviews with nearly 50 stakeholders complimented by conversations with countless farmers, their team and family members. A review of research exploring the current state of health and safety on farm and how farmers think identifies possible root causes of the current state (what's happening now).

Although largely invisible, assumptions and beliefs powerfully influence farmer behaviour including:

- Lack of perceived susceptibility (they don't think they personally will get hurt)
- Risk is normalised by family and peers (everyone's doing it)
- Risk is assumed to be a part of farm work that can't be managed or controlled (when accidents happen they are explained as "freak" events or unpreventable)
- Risks are perceived to be common sense and people are expected to take care of their own health and safety, with some being perceived to be 'just accident prone'.

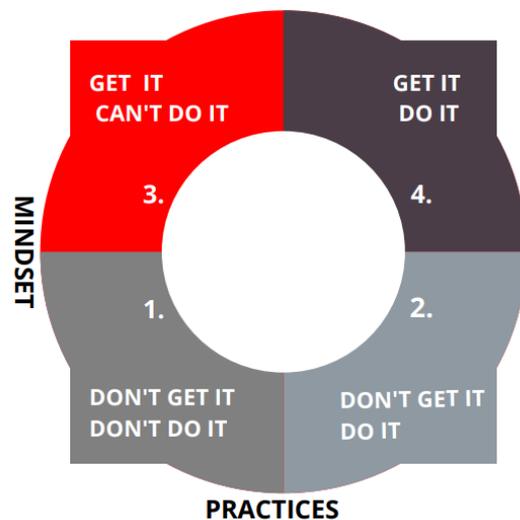
Farmers expect themselves and their people to be super human!

The report uses the Conscious Leadership's Fact vs Story model to explore common farmer beliefs and compare these with facts and data to identify the "stories" that prevent positive change.

Given unhelpful stories are a strong influence on behaviour it is critical that interventions address these beliefs and farmers' "mindset".

However, interventions have traditionally focused on "education only". Health and safety has been pigeon holed as a compliance issue of little value to individuals or their businesses.

Establishing the "why" or "what's in it for me" and the compelling benefits of good work design, is critical. The mindset/practices model shared by Fiona Ewing at the Forestry Industry Safety Council identifies the importance of establishing both the mindset and capability to support the design of good work.



There are examples of farmers in quadrant 4 (get it, do it) which demonstrate what is possible for the sector if the correct mindset and practices (capability) are established.

There are many measurable benefits of good work design which will help establish the "why" for individual farmers including:

- Higher engagement
- Lower absenteeism
- Enhanced social licence



- Better attraction and retention
- Positive return on investment
- Lower costs
- Increased productivity

Articulating these benefits may provide farmers with something they really want (better work and work environments which address some of their existing challenges).

Good work results in win:win:win outcomes: better work quality, more productive and enjoyable work environments and healthy and safe people.

Challenging pervasive stories and unhelpful beliefs requires relationships built on trust. It is important that the sector values those who bring diverse thinking and non-technical skills. Non-technical skills are identified as critical to better health and safety outcomes. Supporting farmers to develop non-technical skills will improve health and safety outcomes but also have a range of other benefits at business and sector level.

Credible, trusted “connectors” need to be available to support farmers to make change – the messenger makes a difference. To be effective these connectors need trusting relationships with those they seek to influence. Building these takes time and requires proper resourcing. It is important to take a holistic approach to the farm system that acknowledges good work design is fundamental to success and influences all aspects of the enterprise; health and safety can't be put in a box.

Once the benefits of good work are articulated and farmers “get it” or connect emotionally with the “why”, the what and how become easier.

With the right mindset, the focus becomes lifting capability by setting up farmers up for “can do”. They need:

- The knowledge (an understanding of why, how and what to do)
- The skill (the research shows this must encompass both the technical **and** non-technical skills required for

success). Developing skill requires practice and it is important that support is provided during this stage.

- The method - The correct method for “good” work design, specific to the farm context and focused on practical and effective outcomes. This requires an understanding of the hierarchy of controls and an emphasis on higher level (more effective) controls like elimination or minimisation, rather than the current sector wide focus on lower level and less effective controls (administrative controls or Personal Protective Equipment). It also requires collaboration and leadership to agree “what good looks like” for the sector.
- The tools – Support from up-stream duty holders (those who share responsibility for controlling workplace risks) is required to ensure farmers have access to the tools required to manage risk in their workplaces and set up for “good work” in a practical and effective way
- The resources – the money, materials and people to be successful. The closed border and current immigration settings are currently a limiting factor due to the severe people shortages in the sector.

Only if all five components of “can do” are present can farmers be expected to successfully manage work design and ensure healthy and safe outcomes for their people.

Increasing awareness of “what good looks like” is also critical to changing behaviour and social norms. This requires a cohesive sector communication strategy. All sector stakeholders need to collaborate to support the messaging which should focus on 2-3 key components.

The Health and Safety at Work Act provides significant fines and other consequences



for farmers who fail to provide safe and healthy work. However, the fragmented, low surveillance farming context reduces the likelihood that these consequences will result in change. Farmers are more likely to die than be prosecuted.

Raising awareness about why, how and what should be done and increasing accountability may be more effective. Leveraging “belonging” to change social norms and make good work design an attribute of great farmers may be more successful. Farmers want to know: are my neighbours doing it?

Changing social norms requires a compelling vision for the sector. This is more likely to be successful if it addresses health and safety by stealth, given many farmers have totally disengaged with the tainted health and safety brand. Motivating farmers with a vision which connects with them on an emotional level is more likely to be successful.

Supporting change by communicating:

- through multiple channels and mediums
- using visuals and graphics (rather than text)

- through story telling to share stories of positive change and develop self efficacy (a belief that farmers have the ability required to design good work and prevent harm)
- examples of the journey taken by farmers at all stages (beginning, developing and excellence) focused on small, low/no cost changes and safe change at a pace and scale suited to individual capacity and resources
- realistic examples of positive change aligned with something farmers really want (more enjoyable, productive workplaces with fewer people headaches)

is the recommended approach.

Ensuring intervention before risks become habituated or “normal” is critical and leveraging children and young people before they embed unhelpful beliefs is key. The next generation of farmers and young people are at the heart of this cultural and behavioural change. Significant change may take a generation and resourcing needs to reflect this and be independent of political cycles.



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Foreword – about the author

I'd never set foot on a farm until 2000 when I met my future husband Chris, a New Zealander, in the USA. I was born and raised in the UK where I qualified as lawyer, working there and in Finland. Chris was born and raised in NZ on a farm.

Chris and I married in the UK in 2002 and moved to NZ in 2005. We had a family and began farming together, purchasing our own dairy farm (in partnership with equity partners) in 2009.

With no technical farming knowledge I was thrown into the deep end: living and working on farm in the Catlins. Managing and leading my own team showed me that whilst the "compliance" my legal career

was focus on was an important foundation, leadership and non-technical (social and cognitive) skills are what make employment relationships successful. I was lucky to have role models around me who coached and mentored me to develop my own capability.

I worked for people management consultancy businesses supporting our primary sector part time from 2015. In 2020 I set up my own business "Primary People". My passion is empowering others to enable "good work, thriving people and great farming". Providing healthy and safe work environments is a critical part of this, as is valuing our people.



Acknowledgements

The list of people I'd like to thank is long. Thank you to the NZ Rural Leadership Trust and those that selected me for the scholarship. I am incredibly grateful for the opportunity. Thank you to the Investing Partners who support the Nuffield programme. Your investment in the future of our primary sector is important and appreciated. I'd also like to thank the NZ 2020 and 2021 Nuffield NZ scholars who have been wonderful partners on this journey.

Thanks to Chris Parsons, Lisa Rogers, Annie Chant and Desley Tucker at Rural Leaders for providing a supportive environment for personal growth. Professor Hamish Gow deserves my personal thanks for his help and insights.

I'd also like to thank our NZ Primary Sector which has provided me with endless opportunities to grow and learn including through programmes run by AWDT, DWN, DairyNZ, the Dairy Environment Leaders Forum, Federated Farmers, SIDE and others.

My thanks goes to the farmers and rural communities who welcomed me into their lives and helped me belong including my equity partners Rob & Sarah Craig, Miranda and Alex Hunter, Lachlan & Libby McKenzie and all the Stratford relatives.

Thank you to all the food and fibre producers who spoke to me about their experiences on farm. Countless people (from farm assistants, to farm managers, farm owners and family members) shared their thoughts, often without knowing we were having a conversation for this project. You're all super heroes!

Many stakeholders shared time in their busy schedules to talk to me for this project. It was an interesting study of leadership in practice. A full list of the stakeholders I formally interviewed is Appendix 1 to the report and I'm indebted to you all.

I wouldn't be here without the support of Chris, Callum and Olivia and my own family in the UK. Thanks to my mum Barbara Staples who's been the proof reader for all my projects since primary school, including this one.

Chris deserves special thanks for patiently teaching me about farming and being my strongest supporter, particularly while I was away on the Nuffield tour. Thank you!

He aha te mea nui o te ao?

He tāngata, He tāngata, He tāngata

What is the most important thing in the world?

It is people, it is people, it is people



List of abbreviations

Act	The Health and Safety at Work Act 2015
CPD	Crush protection device
Current state	What's happening now
ESG	Economic, social and governance
Forum	The Business Leaders Health and Safety Forum
FLINTS	Farmers List of Non-Technical Skills Irwin, Dr A, Sedlar, N. Tone, I (2020) https://research.abdn.ac.uk/wp-content/uploads/sites/8/2021/07/FLINTS-handbook-digital.pdf
Future state	The ideal future state or vision of how things would work in an ideal world
Good work	Work design which optimises: <ul style="list-style-type: none">• Safety• Human performance• Job satisfaction and• Productivity.
NTS	Non-technical skills (social and cognitive skills)
RMPP	Red Meat Profit Partnership
Taskforce	The Independent Taskforce on Workplace Health and Safety
WIIFM	What's in it for me?



Objectives

The report will explore the “current state” (what’s happening now) of health and safety in our food and fibre sector. It will identify the opportunities for improvement and review the existing research and literature to pin point barriers to improving health and safety outcomes.

Having identified the barriers to improvement, my objective is to “redefine” the problem as an opportunity for improving outcomes through the design of “good work” which optimises:

- Safety and health
- Human performance
- Job satisfaction and
- Productivity.

The report will explore the importance of changing mindsets and building capability to support “good work” as the sector works towards a “future state” where people outcomes are improved.

The aim of this report is to articulate a compelling “why” for taking action, which recognises the different motivations of our food and fibre producers and the benefits of good work design.

It will then provide recommendations for improving engagement and addressing capacity and capability shortcomings to enable better outcomes for our food and fibre super heroes.



Chapter 1 - Introduction

The catalyst for this project was this WorkSafe NZ statement:

"Of all sectors, agriculture has shown the least improvement over the last four years. This can only be attributed to a lack of awareness of the critical risk posed by farm vehicles and machinery and the lack of will to do anything meaningful to control the risk!"

As a food and fibre producer, I know we care about our people and each other. Nonetheless, too many people in our sector are physically or mentally harmed at work or don't come home.

Despite attempts to address this problem and improve outcomes, little has changed and rates of fatal, acute and chronic harm in the food and fibre ("**farming**") sector remain stubbornly high.

Reporting in 2013, the Independent Taskforce on Workplace Health and Safety ("**Taskforce**") found many opportunities for improvement in New Zealand's health and safety culture². The Taskforce also identified systemic issues with the components of the health and safety system which, though identified across all sectors, are manifest in our food and fibre sector. These include:

- Poor worker engagement
- Inadequate leadership
- Capacity and capability shortcomings
- Risk tolerant culture and
- Particular challenges to Small and Medium sized enterprises.

This report and my research seek to understand the impact of these issues in the farming sector and how they contribute to the following paradox:

**Farmers care about people and each other and
Their workplaces kill, hurt or harm too many people.**

The problem of improving health and safety outcomes in the farming sector is a really

complex social, economic and environmental problem. The problem requires more than one idea, collaboration between stakeholders and supporting people to be part of the solution. I hope my report will contribute to the conversation but recognise it isn't the whole answer.

Methodology

I developed this research and report through a four-part process called double diamond design³. The process involved the following four stages:

1. Discovery - understanding, rather than simply assuming, what the problem is using root cause analysis. For this project I reviewed reports and literature about the current state and how farmers think about health and safety. I interviewed nearly fifty industry stakeholders (listed in Appendix 1) and countless farmers using a semi-structured interview process to understand their perspective, their challenges, the opportunities they identify and the solutions they recommend. I also spoke with countless people from our farm workplaces (farm owners, farm employees, family members). These discussions were unstructured and many didn't mention the words "health and safety" because I found they resulted in defensiveness or disengagement. The aim was to understand the issues and opportunities those people identified and the perspectives of those at the coal face, who are most affected by the issues.
2. Definition - the insights gathered from the discovery phase helped me to define the challenge in a different way. The challenges I defined, and the questions this report seek to answer are:



How might assumptions and beliefs be barriers to better outcomes?

How might we articulate a powerful “why” for designing good work?

How might we improve capacity and capability?

3. Developing - The second stage required me to identify answers to the clearly defined problem, seeking inspiration from the stakeholders and research.
4. Delivery - The final stage of my report identifies recommendations

for testing on a small-scale. Testing ensures the solution successfully addresses the problem and enables us to reject things that will not work and improve and refine solutions that will before rolling them out on a larger scale.

This wasn't a linear process. Learning more about the problem sent me back to the discover stage more than once and challenged my normal focus on the “what” and “how”.



Chapter 2 - What do we know about the current state?

Although I planned to visit the UK and Australia Covid had other plans! Nonetheless I include both countries in my review of the current state because they operate in the same context and provide useful comparisons.

The data from New Zealand, Australia and the UK shows that agriculture currently fails its people.

1. Acute workplace fatalities

In Australia, New Zealand or the United Kingdom you are more likely to die at work if you work on farm than in any other sector.

Agriculture had the highest number of workplace fatalities of any industry in New Zealand, Australia and the UK in 2020⁴

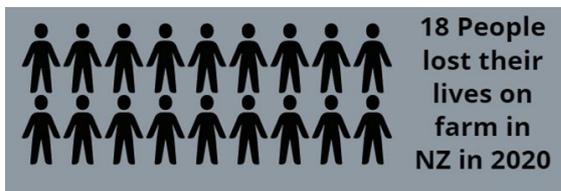


Table 1: Agricultural Deaths in NZ 2020

In New Zealand, the real impact is that 18 people didn't go home to their families last year from our farms. These are mums and dads, sons and daughters, sisters and brothers, friends and colleagues. The impact on our communities is huge: wherever I went during my scholarship year, someone would tell me about their personal experience of hurt or harm or losing someone close to them. The scale of the issue was devastating.

Although the Health and Safety at Work Act 2015 ("Act") was introduced with the aim of improving outcomes, the number of workplace fatalities on farm in NZ hasn't changed much since its introduction.⁵

AGRICULTURAL DEATHS IN NZ BY YEAR

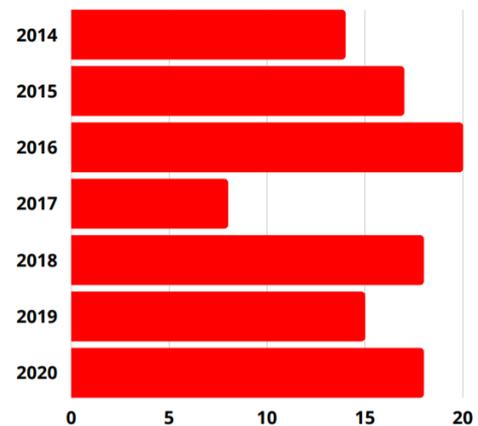


Table 2: Agricultural Deaths in NZ by year

The picture is actually worse than these numbers suggest. Many deaths on farm fall outside the scope of WorkSafe's activities because they don't involve "work" e.g. a child dies by falling into an effluent pond during a meal break; the death isn't considered work related because no work is happening at the time; therefore it isn't represented in the statistics. Given NZ research found that 55% of injuries happening on farms occurred during activities that were not related to farming⁶ this is a significant factor. If we want people to thrive in the sector, they need to be safe and healthy whether they are "working" on farm or not.

2. Injury

Whilst fatalities are a big focus area, there are significant impacts from injury.

a) Occupational Illness

Although we often overlook the risks, many things accepted as part of farming (the sun, chemicals and fuels) can result in illness if poorly managed. Usually the harm won't manifest immediately, which means the connection between the hazard and the



harm isn't understood; once the link is made it's often too late.

Although it receives little attention occupational disease caused by airborne exposure to harmful substances such as chemicals was identified as the primary cause of death in a one off 2016 WorkSafe report, with an estimated 97 deaths and 670 hospitalizations across all sectors in NZ in 2010.

New Zealand also has the highest incidence rate of melanoma in the world. More than 4000 are diagnosed with melanoma, and around 300 people will die from it, each year in New Zealand; in fact more people die from skin cancer than on our roads. Working outside, farmers are at high risk⁷

b) Wellbeing

Research by FarmStrong NZ shows that farmers often suffer from poor wellbeing and that this has a significant impact on farm injury statistics⁸.

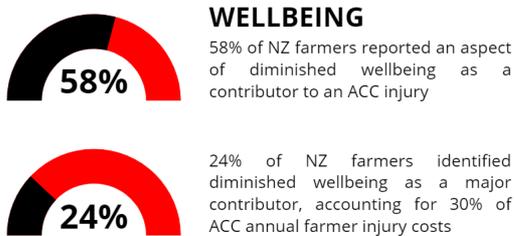


Table 3: impact of wellbeing on injury

This report doesn't fully explore mental health and suicide in the sector⁹. Nonetheless, good work design is an acknowledged protective factor for mental health. The recommendations of this report will support the excellent work done by FarmStrong to support improved individual resilience and wellbeing in the sector by enabling a framework of "good work" and work environments.

c) Injuries resulting in more than a week away from work

There are also persistently high rates of harm resulting in more than a week away from work in our sector.

Injuries resulting in more than a week away from work in the NZ agricultural sector

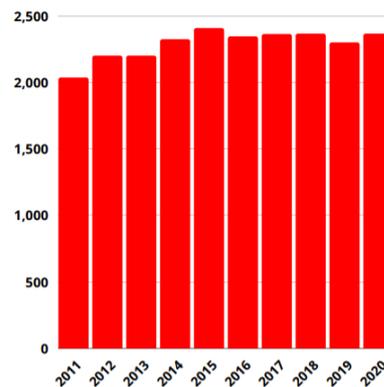


Table 4: Injuries resulting in more than a week away from work

Assuming the best case (a standard 40 hour working week and absence for one week, not more) this is **94,560 hours of lost productivity for the sector per annum**. This impact sits alongside the human cost of these injuries.

Things aren't any better in the UK or Australia despite the fact that they are generally acknowledged to have a more mature health and safety climate with a less risk tolerant culture. In Australia, there were 3893 serious claims between 2019-20 (resulting in a week or more off work). Making similar assumptions this is 155,720 hours of lost productivity. The incidence rate of serious claims in Australia is also highest in agriculture.

In New Zealand 60 farmers get injured every day. That's a big impact on them, their families and the rural community when they get taken out of play.



In NZ 60 farmers get injured **every** day.

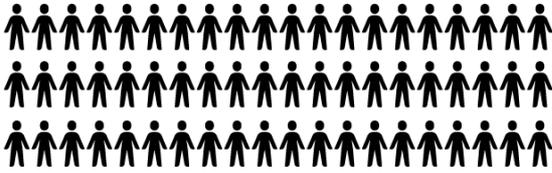


Table 5: Number of NZ farmers injured each day
In the UK, the rate of non-fatal injuries at work each year in agriculture is almost double the all industries rate¹⁰.

All three countries show a stubbornly high rate of non-fatal injury at statistically higher levels than other sectors (even when compared with sectors traditionally considered “dangerous” like mining). Whilst it's hard to compare the three countries directly due to variance in reporting the data, agriculture has higher rates of harm than other sectors in all three.

UK Non-Fatal work injury rate per 100,000 workers



Table 6: UK non-fatal injury rate

Australian Non-Fatal work injury rate per 100,000 workers

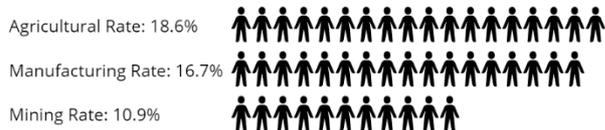


Table 7: Australian non-fatal injury rate

3. Economic Cost

The economic cost of these workplace injuries and work-related ill health are significant to all three countries. Improved outcomes would result in substantial financial savings. Given the cost of current performance there is a strong argument in favour of investing in improvement interventions.

In New Zealand in 2020, for example, there were 22,796 farm-related injury claims accepted by ACC which came at a cost of **\$84 million** to help people recover¹¹.

Farm related injuries have cost ACC **\$383 million** over the past 5 years.



Table 8: ACC farm related injury costs

The total costs of workplace injury in Agriculture, Forestry and Fishing in the UK in 2018/19 was estimated at between **£108M - £274M**¹².

4. Retention

Ministry for Primary Industries data shows that the primary industries have a lower retention rate for new entrants to the sector than the national average¹³. Health and safety outcomes may contribute to poor rates of retention because:

- people may leave the sector if they sustain an injury which prevents them from working in a role which generally requires physical fitness
- people are unlikely to remain in a workplace where they do not feel valued or which doesn't protect their health and safety.



NZ New Entrant % Retention Rates

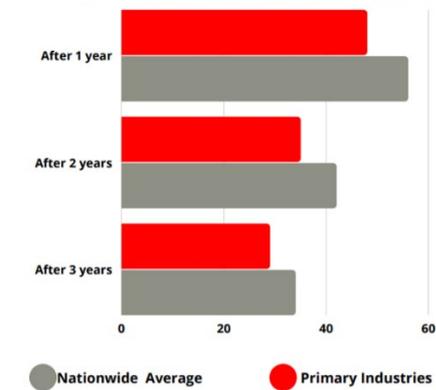


Table 9: NZ new entrant retention rates

5. Current state summary

There is clear evidence that the current system is failing. Agriculture is the most dangerous sector in New Zealand, Australia and the UK. Workplace deaths and injuries happen at a higher rate than any other occupations.

This report will explore the causes of our current state, what a future of “good work, thriving people and great farming” might look like and discuss how we might get there.



Chapter 3 - Identifying the root cause of the current state

1. Introduction to root cause analysis

To solve any problem, it is critical to get to the root cause¹⁴. Fail to do this and your solution will address a symptom of the problem and likely fail to be effective. The problem will inevitably reoccur and the investment in problem solving was wasted.

“Weeds” provide a good analogy. You can cut a weed off above the surface but if you don’t destroy the roots, it will grow back again. To completely kill a weed, you must deal with the roots.

Symptom of the problem,
"THE WEED"
Above the surface, is obvious



The underlying causes
"THE ROOT"
Below the surface, not obvious

Table 10: Root cause diagram

The right people must be involved to fully understand a problem: diverse thinking is key to good problem solving. Putting aside assumptions, listening without judgement and focusing on objective data are also fundamental to good problem solving. This can be a challenge and is often a barrier to effectively identifying root cause.

My goal for this report is to understand the root cause of the sector’s poor health and safety outcomes. Once I’ve identified the barriers to safe(r) work I will explore

opportunities for improvement and make some recommendations about how we address the root cause to create real and enduring change.

The importance of root cause to effective interventions

Case study – Crush Protection Subsidy from ACC

Data consistently shows that quad bikes are a major cause of death and serious injury, including from accidental rollovers. On average, five of these accidents result in a fatality each year and ACC receive over 1,000 claims for work-related quad bike accidents annually. WorkSafe NZ’s Policy Clarification: Crush Protection Devices on Quad Bikes (May 2019) strongly recommends the installation of a Crush Protection Device (“CPD”) on all quad bikes.

ACC is currently offering a \$180 (+GST) cash back on certain types of CPD, which start from \$595 (+GST) to support CPDs on quad bikes.

Whilst 35,000 farmers and businesses are eligible to access the subsidy, only 270 have taken it up. My local Honda servicing yard shows only a couple of the 40-50 quads in their yard have CPDs.



The ACC subsidy assumes that cost is one of the barriers to uptake. However, is this the real root cause of farmers’ behaviour? If we don’t understand the root cause our enablers or interventions won’t be effective or successful.

Table 11: Case Study CPD subsidy



2. 5 whys problem solving technique

The 5 whys¹⁵ problem solving technique is a simple tool for identifying root cause and can identify surprising results. The technique involves asking “why” as many times as required to reach the root cause of a problem. For example:

Problem: Farmers don't wear seat belts.

1st Why: Why don't farmers wear seat belts?

Answer: Because they are time consuming and frustrating.

2nd Why: Why are they time consuming and frustrating?

Answer: They have to be taken off and on too many times.

3rd Why: Why do they have to be taken off and on so many times?

Answer: Because there is a need to get constantly in and out of vehicles.

4th Why: Why is there a need to constantly get in and out of vehicles?

Answer: To open and close gates.

5th Why: Why is there a need to open and close gates?

Answer: Fencing and gates are required to keep stock contained.

The root cause of the problem in this hypothetical example is the requirement to keep stock contained. A financial incentive for seat belt installation wouldn't be effective to address this.

Having identified the root cause, we can begin to identify effective solutions. It may be a basic assumption that farms need fencing but innovative technology (e.g.

Halter) may enable the elimination of the barrier to seat belt use (fences & gates).

Mike Cosman a member of the Taskforce shared this example in our interview and it's a great example of the importance of **diverse thinking** – people with different perspectives can help us question our assumptions.

3. Understanding root cause: What the research tells us about farmers' attitudes and behaviour

Efforts to understand root cause are hampered by a lack of research directly examining farmer attitudes to health and safety in New Zealand. However, some international research explores farmer attitudes and how these might impact on behaviour and outcomes.

a. Health Belief Model

The Health Belief Model provides a useful framework for unpacking the international research.

The Health Belief Model explains and predicts human behaviours based on individual beliefs and attitudes¹⁶. Our individual attitudes and beliefs are impacted by a number of other factors including:

- social norms of the population to which we belong;
- prior knowledge about the causes of the issue; and
- the perceived use of implementing strategies to minimise risk or threats related to the problem (whether we think we have any control over the outcome or believe that tools and practices will help).

These factors combine with the result that each individual forms a view about the likelihood that any change to behaviour will be beneficial to them. This cost/benefit assessment, alongside beliefs regarding our



ability to successfully implement required changes results in our action toward change.

Put more simply:

If I think there is a real risk of serious harm or injury to me, and I believe there are positive steps I can take to avoid this outcome which are within my capability, I am more likely to change my behaviour or take steps towards improving work practices.

In reviewing the international literature and research I've broken down the findings in line with the framework of the Health Belief Model¹⁷. There are four things which explain why farmers behave the way they do:

b. Farmers don't think they'll get hurt or injured (perceived susceptibility)

Farmers:

- are over confident in their capability;
- think bad things won't happen to them;
- think that they don't (personally) make mistakes;
- think that what they do isn't dangerous;
- think that current practices are as safe as they can be;
- think that some risk is part of what they do and just has to be accepted; and
- think they can control everything through their experience.

Overall **farmers think they are super human!**

c. Social norms in the food and fibre sector increase risk acceptance

Risky behaviours are modelled by parents and peers in the sector and become the "norm". Exposure to these negative role models and poor job training results in a belief that the "norm" is the correct way to

do things. This echoes the findings of the Taskforce, who found that a risk tolerant culture was a problem for NZ.

There is also strong resistance among farmers to anything which undermines the values they hold strongly (including autonomy and personal experience) which means expert advice (including from WorkSafe) is frequently rejected or received with scepticism.

There is also a perception everyone is aware of the hazards (which are seen as common sense) and responsible for themselves. This perception was reaffirmed in my discussions with farmers. Many felt the hazards in their workplace were "common sense" and some even went so far as to say that injuries and death were a form of natural selection (e.g. if you didn't have the common sense to identify and control the risk, you shouldn't be on farm). This can be explained by their stage of learning. Many of our most experienced farmers are "unconsciously competent".

d. The stages of learning

The **stages of learning**¹⁸ explain why many farmers may perceive health and safety as "common sense".

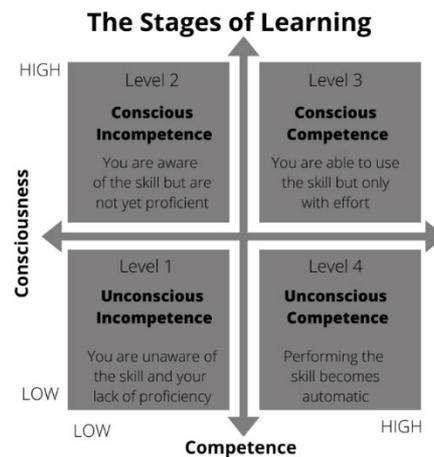


Table 12: The Stages of Learning

Many, if not all, of the most experienced farmers are at level 4 (unconsciously



competent) for many of the tasks they complete on farm. At this stage the skill is intuitive and can be done automatically. It feels like “common sense”. People at this stage may assume everyone has the same level of knowledge that they do.

The other risk of unconscious competence are:

1. Complacency: Farmers work in a dynamic environment. Complacency is a significant risk that needs to be understood and managed. Unconscious competence can kill if you fail to remain situationally aware and notice changes to the environment.
2. Unrealistic expectations: unconsciously competent people are poor teachers. They've forgotten that they had to learn the skill, that this took time and practice and that there are a number of steps involved in the task. This results in unrealistic expectations. They expect their students (who may be (un)consciously incompetent) to become skilled at the task immediately, with little support and without making any mistakes.
3. When “experts” (the unconsciously competent) try to share knowledge, teach skills or design interventions for farmers who know nothing or little about a subject this can set everyone up to fail. There can be a big gap between the solutions experts work on and what will be useful for farmers. It is important to understand the context farmers are working in, their stage of learning and prior knowledge, and then build tools around that. Experts know what they want to tell people but without the overlay of “what is the farmers' stage of learning and where are they currently with this issue?” successful outcomes are unlikely.

Risks of complacency and lack of situational awareness

I believe this equation explains the risks of complacency and a lack of self or situational awareness well.

If:

- I'm operating at 95% (8 hours sleep, well hydrated and fuelled with nutritious food, focused on the work at hand, competent at the task); and
- The environment is 95% safe (tracks well maintained, good visibility & weather); and
- My plant, equipment or vehicle is 95% safe (well maintained and serviced, right tool for the job, appropriate engineering controls in place)

The odds of a successful outcome are 85% ($0.95 \times 0.95 \times 0.95 = 0.857$).

However, the probability of a successful outcome deteriorates catastrophically with just a slight change:

If:

- I'm operating at 75% (6 hours sleep the night before, distracted by a personal matter, poorly hydrated and low blood sugar); and
- The environment is 90% safe (tracks well maintained, good visibility, sticky surface due to recent rainfall); and
- My plant, equipment or vehicle is 85% safe (right vehicle for the job, uneven tyre pressure but otherwise well maintained, lacking engineering controls like a CPD)

The odds of a successful outcome suddenly drop to 57% ($0.75 \times 0.90 \times 0.85 = 0.57$).

This paints a compelling picture of the need to remain aware of unconscious competence and ensure situational awareness (assessing the situation and our state) **every time** we engage in a task, no matter how many times we've done it before.

Table 13: Probability of outcomes and risks of complacency



e. *Farmers' beliefs and lack of knowledge about the ability to control the risk are unhelpful*

Farmers juggle many hats. They are increasingly required to have comprehensive knowledge of the various components of running a successful business, including managing health and safety and people.

Knowledge about how to control risk and what good work looks like comes from prior experience. It can be hard to find good or great examples to learn from which means farmers often have a poor understanding of how to design good work. The result is that many don't have the knowledge, skills or tools to design "good work".

Underlying beliefs are also limiting including scepticism about the effectiveness of known controls (e.g. seat belts).

In my interviews with farmers I began to recognise the same pattern of unhelpful beliefs and lack of awareness/knowledge of the ability to control the risk.

Reflecting on what I was hearing, the **fact vs story model** from the Conscious Leadership Group was useful¹⁹.

The model makes explicit our minds' tendency to takes in **facts** and then make up **stories** about the facts based on our beliefs and assumptions.

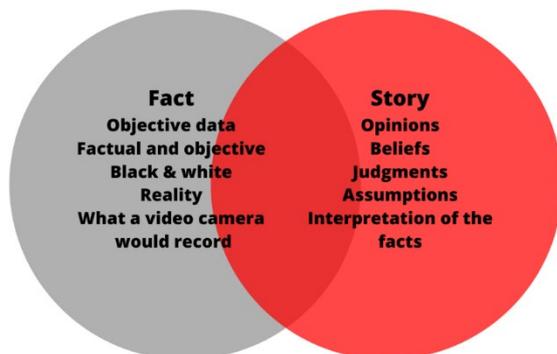


Table 14: Fact vs Story Model

As I talked to farmers, the difference between fact and story was stark.

Identifying the difference between "**stories**" and the "**facts**" is critical to better outcomes. There are many examples of unhelpful stories about the facts that I heard, but here are just a few:

Story	Fact
<p>I can avoid an accident because of my experience.</p> <p>It's the young guys with lack of experience who are most dangerous</p>	<p>Experience doesn't prevent accidents.</p> <ul style="list-style-type: none"> In Australia 62.1% of fatalities are over 45 years old²⁰ In the UK more than half of the workers killed were aged 60 years or older²¹. In NZ the highest percentage of vehicle related fatalities are in the 65+ years age bracket (40% between 2015 & 2020) with 58% in the 55 + years age bracket.²²
<p>I'm better off not wearing a seat belt and 'jumping free'.</p>	<p>Analysis by WorkSafe in 2020 found that of vehicle-related fatalities, nearly half those that occurred on-farm could have been avoided if a seat belt was being used.²³ It's the same story in Australia where. 53% of deaths involving farm utes could have been avoided, had seat belts been worn, or no passengers carried in the tray of the ute.²⁴</p>
<p>Farming requires long hours and few days off.</p>	<p>Work can be designed to manage hours of work.</p>



Story	Fact
I'll be fine if I'm driving on flat terrain.	Quad bike rollover accidents show they can happen on almost any part of the property (even flat terrain) to experienced and inexperienced riders. ²⁵
We need to work on building people's resilience and individual wellbeing.	Building resilience and working on individual wellbeing is part of the solution. However, work by Dr Hillary Bennett ²⁶ shows that individual resilience and wellbeing will be undermined if the work environment doesn't support "good work". Supporting the individual is ineffective if the work environment doesn't include good work.
An accident is just bad luck. That was just a freak accident. There is nothing that could have been done to prevent that.	According to WorkSafe's Brent Austin, many vehicle accidents are preventable. "What we know is that we could actually reduce serious harm incidence and fatalities by at least 50%, if we do two simple things. That's 50% more people going home to their family and community. Seatbelts and CPDs". Although it may be more comfortable to believe that there is nothing that can be done to prevent accidents, root cause analysis identifies many controllable factors in most, if not all, accidents.

Story	Fact
I've got the latest gear, that's the safest.	Quads that are two years old or newer at the time of the incident account for half of all rollover claims, despite accounting for only a quarter of the quads insured ²⁷ .

Table 15: Fact vs Story examples

In his fascinating book, Matthew Syed²⁸ talks about cognitive dissonance and dissonance reduction. He explains that the more strongly we attach our identity or self-esteem with our story or beliefs, the more fiercely we hold on to our stories. Even when faced with clear evidence they are wrong: we are more likely to reframe the evidence than we are to alter our beliefs. Sometimes we ignore the evidence altogether. Talking to farmers, this tendency was clear. Many resisted any attempt to point out a story, defending, inventing new reasons, new justifications, new explanations for why what they're doing is ok.

f. Farmers feel they lack the skills and ability to do anything about this.

There is a general attitude amongst farmers that individuals control their own personal safety and that when accidents happen it is because of personal factors i.e. "some people are just accident prone" or "it was a freak accident". There is little understanding that good work design can eliminate or manage risks.

There is also a difficulty understanding what is required on farm to meet good practice/legal requirements. "Lived" experience proves "paperwork" doesn't save lives.

Confusing messages and information about what must/should be done to 'comply' with rules and regulations



compound the issue. The overall outcome is that many farmers don't feel they can do what is required of them (they lack "**self-efficacy**" or belief they can be successful with influencing health and safety).

g. Non-technical skills

Non-technical skills ("**NTS**") have been identified by several research projects as the most relevant factors for improving safety outcomes and work cultures generally.

Australian research concluded²⁹:

- A focus on teamwork and communication is most effective in reducing errors and improving safety culture and workplace health and safety outcomes;
- health and safety management systems are only effective when employees are involved in the development of all safety activities;
- improvement in work health and safety can only occur in the context of open, blame free communication of issues and events, both before and after events;
- Work procedures and or training, focused on team work and communication between team members reduces errors.

Despite this, in the farming context, technical skills (e.g. stockmanship, the ability to operate vehicles and machinery, or measure and manage pasture) are more highly valued than non-technical skills.

The importance of non-technical skills in farming is the subject of extensive research by Dr. Amy Irwin and her colleagues at the University of Aberdeen. Dr Irwin and her team have created a **Farmer List of Non-Technical Skills** ("**FLINTS**") system³⁰. FLINTS is a behavioural marker system designed to support the training and assessment of

farmer NTS. It aims to help identify the observable NTS that lead to safe **and** effective work performance. This provides a basis for talking to farmers about these skills, identifying where gaps may be and helping them develop the NTS (cognitive and social skills) that, in addition to their technical expertise, will help them prevent accidents and injuries and design good work. The FLINTS resource includes:

- A list of necessary non-technical skills; and
- Examples of good and poor observable behaviours related to each skill.

The NTS required by farmers include the ability to have conversations with others, lead, delegate, coach and mentor a team. This is increasingly important as the size of the team grows. Traditionally smaller farms were family run or owner operated. With the increase in farm size, businesses can no longer be operated in this way and more employees are required, increasing the requirement for NTS. NTS are also increasingly important as farmers need to foster and maintain effective relationships/communication with others to effectively manage their increasingly complex businesses. Improving NTS will help address some of the issues identified by the Taskforce including poor worker engagement and inadequate leadership.

The Business Leaders Health and Safety Forum (the "**Forum**") recently produced a number of resources aimed at Protecting Mental Wellbeing at Work working with Dr Hillary Bennett³¹. These are focused on the design of "good work" to protect mental wellbeing, identify risks to mental wellbeing and redesign work to manage them.

The phrase "**good work**" was introduced by Safe Work Australia³² and I have used it throughout this report, in a broader context than the Forum, to identify work which identifies and manages risks to physical and mental health whilst also optimising:



- human performance
- job satisfaction; and
- productivity³³.

My reading identifies a strong alignment between the Forum's Good Work Requirements and the FLINTS. This alignment is set out in more detail in Appendix 3 for those who are interested.

With this understanding of farmers' attitudes and beliefs in mind, I'll explore sector led interventions, their focus and effectiveness.

4. NZ Sector led interventions

I reviewed the interventions and support provided by NZ levy bodies (including DairyNZ and Beef & Lamb NZ) and WorkSafe NZ. Safer Farms also provides some resources on its website. For the most part the support provided by these organisations was written guidance material (websites, printed materials, email alerts and newsletters) although both DairyNZ and Beef and Lamb NZ ran a series of workshops shortly after the introduction of the Act for their members.

These interventions were focused on providing information (education only) about what requirements farmers need to meet, together with some tools to support this. The focus, in the levy bodies' own words, was on meeting "**compliance**".

Case Study: Beef & Lamb NZ Safety Management System Workshops

Following the introduction of the Act Beef & Lamb NZ developed a health and safety management system workshop and resources.

97 workshops were attended. The workshops were astonishingly successful. They attracted 2,968 time poor farmers across the country to engage in health and safety.

Beef & Lamb NZ's 2015-16 Annual Report stated "These were **new workshops to help farmers deal with increased regulatory compliance**. The workshops aimed to **simplify compliance... most farmers left the workshop with 90-100% of their safety management plan in place. The system is simple, to-the-point, and gives farmers exactly what they need to comply.**"

Table 16: Case Study Beef & Lamb NZ H&S System

The Taskforce found that many programmes were ineffective, in part, because they fail to change attitudes to health and safety. As the Taskforce said "**Programmes generally focus on behaviours, rather than the reasons for the behaviours.**" Although the Taskforce reported in 2013, this feedback does not appear to have been incorporated in NZ's sector led interventions thus far.

As part of this report I drew on data from a group of 2021 Southland/South Otago farmers. This data shows that the levy bodies previous interventions were successful at their aim: improving compliance. As the graph below identifies, the sample group demonstrate high levels of "compliance"³⁴ indicating that they have followed the advice and guidance of their levy body.

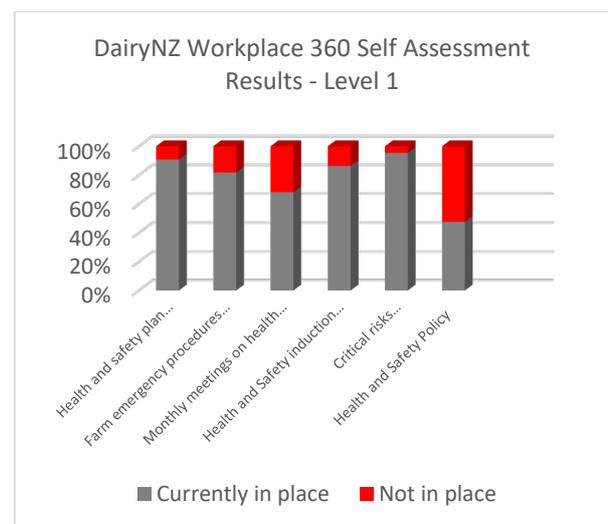


Table 17: NZ farmer sample group compliance results



The success of previous interventions should be recognised. NZ farmers were told compliance was important and the sample group indicates they rose to the challenge of ensuring their businesses were compliant.

This compares favourably with Australia where:

“Only 43% of those interviewed said they had a range of safety policies and procedures documented on their farms.³⁵”

Whilst compliance is good among the sample group, their data indicates opportunities to improve outcomes by going beyond compliance to improve how teams communicate, their situational awareness and leadership skills (non-technical skills). This is important as a component of addressing the poor worker engagement and inadequate leadership identified as problematic by the Taskforce. As the graph below identifies, whilst most of the sample group have the components of compliance well covered, the components of good people management (engagement and leadership) are not embedded in their practice.

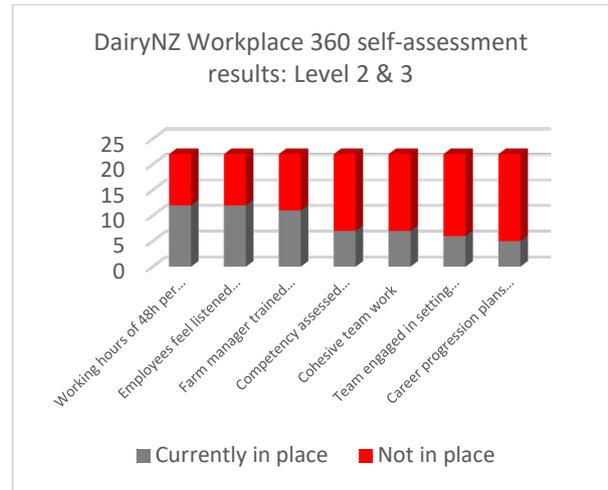


Table 18: Farmer sample group NTS results

In summary, the support provided to farmers to date has focused on compliance and education only. It didn't address motivation or “mindset” or reason for their behaviour. Nor did it help them develop the social or cognitive skills required to change the culture of their team. Rather, it successfully delivered knowledge and template tools to large groups in a relatively short time frame with limited resource. The outcome was high levels of compliance with minimum standards.

However, people have the biggest impact on health and safety through their behaviours. The education only, compliance focused approach did not change culture or address the underlying beliefs (“stories”) that drive farmer behaviour.



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Chapter 4 - Designing our future state

My research included talking with over forty stakeholders and countless farmers (although the majority were dairy or sheep and beef farmers). This enabled me to identify examples of good and great practice already happening in the current state. We can draw on these to purposefully design a **future state** or vision for the sector which supports the culture we want to have, rather than the one we've inherited.

The people leading those workplaces show us what success looks like. Are they getting everything right? No, the sector hasn't set them up for success (see below) but they understand the "why" (have the right mindset) and their practices make them great examples of what our sector could look like.

Fiona Ewing at the Forestry Industry Safety Council³⁶ shared a model which became pivotal in unpacking what I saw and heard during my research. In short, I found four main groups of farmers. This model helps identify where they sit based on their:

Mindset

The established set of attitudes held by someone.

And

Practices

The actual application or use of an idea, belief, or method, as opposed to theories relating to it.

1. Mindset and Practices Model

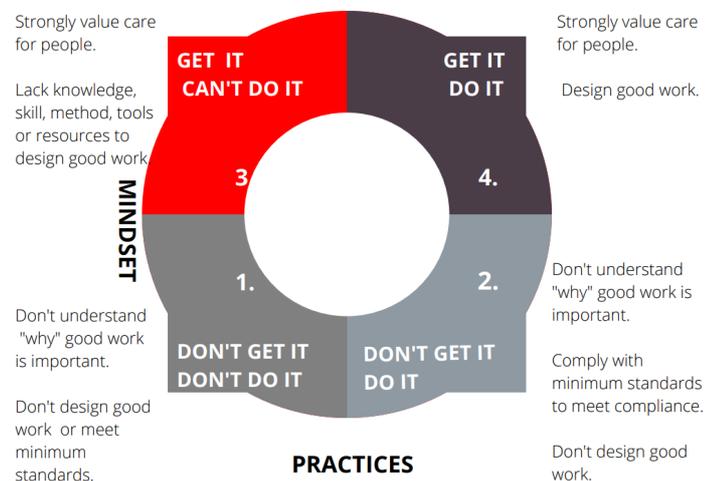


Table 19: Mindset and Practices 4 Quadrant Model

Reflecting on this model I identified that sector interventions around health and safety have assumed that people have the right mindset, "get it" or understand the "why". The focus has been on delivering knowledge, technical skills and tools:

- Information about the legislation and legal duties
- Information about what good health and safety management systems look like (e.g. components including risk registers and emergency procedures)
- Tools to help (template risk registers, accident investigation forms, safe work procedures).

This assumes that people:



1. have the right mindset or understand “why” good health and safety management is important
2. have the capability to change their behaviour following “education only” interventions.

This fails to recognise the root cause of the problem which can be attributed to two key components:

1. mindset (understanding susceptibility to risk and that designing good work, incorporating controls can make work safe(r)); and/or
2. capability and capacity to make change.

When we think about the model, sector interventions and support aimed to move people from quadrant 1 to quadrant 2 (from non-compliance to compliance). This overlooks the importance of mindset to successful change management and ignores the international research which concludes mindset plays a significant role in how farmers engage with health and safety.

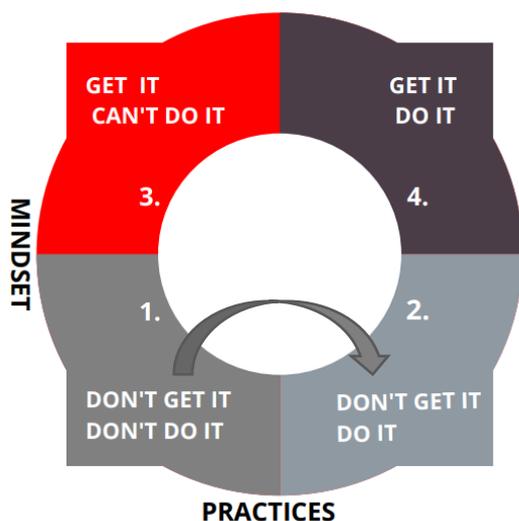


Table 20: Mindset and Practices 4 Quadrant Model: focus of sector interventions

My interviews identified examples of farmers in all four quadrants of the model. There were clear characteristics for each of the quadrants which are explored in more detail in **Appendix 4**. In general terms, the Quadrant 4 (Get It, Do It) farmers were people focused and ensured that the physical, emotional and social needs of people were at the core of decision making. The result was highly capable, engaged, productive teams achieving high quality outputs.

“The interesting thing was, when we judged the awards for the best health and safety at Fortuna Group, the winners were the farms that were doing well across everything (production, profit, animal welfare, people, environment)”. **Ant Sutherland, Sutherland On Farm Solutions**³⁷

By contrast, Quadrant 1 (Don't Get It, Don't Do It) farmers see people as a necessary evil and rarely, if ever, consider their physical, emotional or social needs in decision making or work planning. The result is dysfunctional teams, disengaged employees, lack of productivity and low quality outputs.

Recognising the importance of mindset and capability, I believe the sector needs to change its approach and the focus of its interventions. The target outcome should be to move more farmers into Quadrant 4 (“Get it, Do it”). This will require a focus on both mindset **and** capability. The rest of this report sets out my recommendations for how we support this change.



2. Articulating a compelling vision

Exciting and motivating people to change requires an emotional connection with something they care about. Compliance – the focus thus far, isn't enough.

Unfortunately, health and safety is a tainted brand amongst many farmers. This was clear from many of my discussions. The legacy of a focus on compliance is that it's seen as exactly that: a compliance task; paper based; of very little relevance to what they actually do day-to-day; unlikely to add value or keep anyone healthy or safe.

To engage farmers will therefore require health and safety to be reframed. A compelling vision and story of opportunity is required.

Most farmers care about their people. Research by FarmStrong also shows they are strongly motivated to engage in activities which will help them with aspects of farming which limit their ability to thrive including:

- 35% wanted to know how to manage tiredness and fatigue;
- 29% how to stop worrying about work all the time;
- 31% how to manage stress;
- 34% how to get the best out of employees³⁸.

The Quadrant Four farmers have used their skills to design good work which gets the best out of their people. The outcome is a better ability to manage stress because they can deal with conflict, delegate with confidence and share responsibility for work outcomes. These skills help them get the best out of their people and develop a team they can rely on to support them with good work results. The outcomes for their people are also better: their employees understand how they contribute to the big

picture (a meaningful purpose), their role and responsibilities, are developing capability and feel supported in an enjoyable work environment.

Creating a compelling vision requires an understanding of the intended audience, what they want, what will engage them and get their buy in.

I believe that vision could be:

“Good work, thriving people, great farming”

Whilst a vision based around health and safety will turn a lot of farmers off (due to prior experience and perceptions) this vision will be inspiring to many; it conjures a future state which addresses many current pain points.

The next step is to transform that vision into action.

3. Changing mindsets

The foundation for all behaviour change and personal development is self-awareness. This involves becoming more aware of how our natural tendencies impact the way we think, solve problems, and relate to others.

Mindset is a big barrier to effective change. Addressing the beliefs and assumptions (mindset) that form the basis of behaviour is critical to changing culture and outcomes. This is a challenge because beliefs are unspoken and largely invisible: we lack unawareness of them despite the fact that they are a powerful influence on our behaviour.

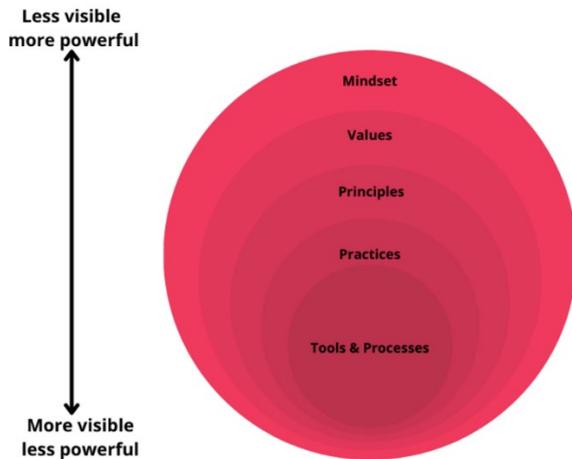


Table 21: Influences on behaviour

If we want to change the mindsets that are the basis of sector practices recognising current assumptions and beliefs and identifying whether they are fact or stories is essential.

a. A compelling “Why?”

Until now, the “why” for designing good work hasn’t been well articulated to farmers. As highlighted, the focus has been on compliance.

Changing mindsets requires a compelling “why”. A compelling “why” helps us to persevere, even if something is difficult or time consuming.

If the “why” is aligned with self-awareness of limiting assumptions and beliefs (“**stories**”) and strong messaging around the ability to control outcomes (**growth mindset** and **locus of control**) changing behaviours is more likely to be successful.

Until now, most health and safety interventions have been based around the “**what**” i.e. what your responsibilities are, what you need to do to identify and manage risks. There has been some focus on the “**how**” e.g. how to record risks and their controls on a risk register.

We need a fundamental shift to talking about the “**why**” if we want to change

mindsets. The why or ‘what’s in it for me?’ (“**WIIFM**”) is what motivates people to shift their mindset about whether something is important or not. It is the driver of behaviour.

Until now, articulating the why for designing “good work” has been poorly done. The focus on compliance means that the value has been overlooked. This needs to change.

Everybody has a motivation (or why) to do something, but for everyone that motivation is different. If we want farmers to change but we only market around one specific motivator (i.e. compliance) only those who connect with avoiding the risk of prosecution or fines are likely to hear the message and get involved. A compelling message needs to sell the opportunity for designing good work and this needs to be connected with the “why” of “WIIFM” for the individual farmer. This must recognise that farmers are not a homogenous group.

Simon Sinek talks about how great leaders inspire action³⁹. He says they help people understand the “why” we should change, not what we should do or how we should do it.

Connecting with farmers’ “why” will be more successful and enduring at changing prevailing culture: “when you agree on the “why” you have to do something, the how gets easier”⁴⁰



Table 22: Simon Sinek's Golden Circle



Selling the vision or “why?” also needs to focus on the positives and talk about what will be better – not what’s wrong. Farmers have no bandwidth for more criticism or mandated change. Providing opportunity will be more successful.

b. What are the Benefits of good work/ WIIFM?

A comprehensive and robust pool of evidence shows good health and safety (or good work) has considerable and measurable benefits for businesses, people and society. These benefits haven’t been well promoted to farmers.

Focusing the conversation on “good work” and “thriving people” would mean farmers don’t know they are having a conversation about health and safety (a tainted brand). The conversation shifts to something farmers actually want.

“In short, good Health and Safety management is good business”⁴¹

So what’s in it for farmers if they focus on good work design?

If you care about people...

We need to change the focus from compliance to care.

Providing good work supports thriving people. Put simply rural people, businesses and communities can’t thrive if the sector has the highest risk of a fatality or injury at work and its workplaces fail to support physical or mental health.

Rural communities can’t thrive if the people within them are too fatigued to do anything other than work, suffering acute, chronic or catastrophic outcomes arising from their work or grieving for people who haven’t come home.

If you want a more engaged team...

Good work design, as demonstrated by Quadrant 4 businesses, creates an environment in which people feel they belong and are important. It provides good worker engagement which is one of the opportunities identified by the Taskforce. Providing an environment where employees are meaningfully included in information sharing and decision-making, are growing and developing their capabilities, have responsibility for delegated tasks and influence how work gets done creates higher engagement and motivation.

Engaged employees genuinely care about their work and will put in extra (discretionary) effort. This leads to greater productivity, innovation and better outcomes. Who wouldn’t want that? Two thirds of workers in one survey said they would work harder for an employer who invested in their health⁴² which demonstrates the compounding effect of care: research shows cohesive, caring team members and actively caring about team members creates safer environments⁴³.

If you care about the market or your customers...

Covid has thrown up challenges but it’s also delivered an opportunity: enhancement of NZ’s international reputation as a safe and healthy food and fibre producer. “It’s given us a halo for our food⁴⁴”. This halo can quickly be tarnished by a story which highlights the improvements needed in health and safety performance. With social media, this is a constant threat as stories travel virally around the world at the click of a button.

Stakeholders (including local communities, other New Zealanders and international customers) expect farmers to look after their people. Each time someone is hurt or



harmed at work, they tell their family, friends and neighbours. This damages both the reputation of the sector and its social licence. Retaining social licence and ignoring what stakeholders want is impossible.

Fonterra highlights the risk of failing to keep up with customers' expectations "Last year one of our customers stopped doing business with 47 of their suppliers because they did not meet their sustainability standards and couldn't help them achieve their future sustainability targets⁴⁵".

Fonterra also highlights: "many of our major customers have minimum expectations about the way that employees are treated on farm and this will only increase... We should all be providing safe and healthy work environments (both physically and mentally) so that people thrive at work, stay safe and get home to their loved ones every day... Some of our biggest customers even require us to prove it, by disclosing workplace and labour conditions on supplying farms.⁴⁶"

To meet the needs of customers and the market NZ must maintain its reputation as a safe and ethical food producer. Good work and thriving people need to be at the core of this brand proposition.

If you want to attract and retain people...

Telling the story of how the sector is good for people will make it more attractive as an employer. The work and workplaces the sector provides are a signal to the labour market "this is how we do things". The best (or worst) people will come based on this. Failing to provide good work and workplaces that support thriving people, will mean people look elsewhere for work. This is a pressing issue as low levels of unemployment and competition for talent mean employees hold the power.

Telling the story of good work supporting thriving people will attract and retain the best. The sector has lots to offer, including many of the things people hold more dearly since COVID: meaningful work (producing natural, nutrient dense food); working outside in nature; protecting and enhancing the environment; contributing towards green house gas reductions; caring for animals and people; and building on a legacy of innovating to meet customer needs. The sector needs to get better at telling this story.

If you want to reduce absenteeism in your team...

Good work reduces sickness absence – 45 out of 55 organisations in one study reported a decrease in sick absence because of good work interventions⁴⁷.

If you want to attract purpose led people...

Designing good work involves articulating a strong purpose, together with a vision and values. These shape team behaviour. Quadrant 4 farmers articulate a strong vision and purpose. These may appear to have little to do with farming but when we consider what "good work" looks like we can see they actually provide a strong "why" for that business and its people. This is important because clarity ensures the business attracts those who align with the vision and purpose. When everyone shares a common vision, purpose or values and these are lived, this increases productivity, effectiveness, motivation and engagement.



A clear purpose is critical because, as Simon Sinek states “offer someone the opportunity to... reinvent an industry as the primary incentive, and it will attract those drawn to the challenge first and the money second⁴⁸”. Committing to the strong vision of “good work, thriving people, great farming” we will attract people drawn to the challenge.

Case Study: Legendairies, Southland

<https://www.facebook.com/legendairies/videos/2925151151102143>

Legendairies are a great example of how vision, purpose and values can be leveraged on farm. They articulate their vision, purpose and values as:

“**Vision** (why we exist): Building Leaders Through Leadership.

Core Purpose (how we do it): Improving others as a result of our presence and making sure that the impact lasts in our absence.

Core Values (what we live for):

- **Listening** – listening to understand
- **Encouraging** – encouraging belief in yourself and others
- **Attitude** – a positive attitude will lead to positive outcomes
- **Diversity in life** – a healthy work/life balance
- **Education** – consistently learning and growing oneself and others
- **Respect** – treat others how you want to be treated
- **Supporting communities** – having a positive impact in our community”

Their compelling vision, purpose and values attract those who align with them ensuring a stable and productive team, great work life balance and strong and productive business.

Table 23: Case Study Legendairies, Southland

If you want to retain your people...

Good work reduces personnel turn over by up to 33% (and the costs associated with replacing staff or hiring temporary staff to cover absence). With the current people shortages in the sector, better retention is a compelling reason to focus on good work design⁴⁹.



Table 24: Employee Turnover

If you want financial benefits...

Good work results in lower administration and legal costs and lower insurance. This improves financial resilience and can increase financial returns (lower insurance premiums, lower repairs and maintenance costs, less loss time and other production impacts)⁵⁰.

If you want increased productivity...

Good work results in fewer production disturbances (fewer mistakes, less absenteeism and turnover) and quality work outcomes. This increases productivity as there are less interruptions in optimum work flow⁵¹.

If you want an increased return on investment...

Research shows a positive return on investment on good work interventions. A recent report from Deloitte's shows a return of \$1.62⁵². One UK study demonstrated an enormous return on investment of up to £31 for every £1 spent⁵³. Whilst not all case studies show such a significant return, the



return on investment is positive for almost all interventions.

If you care about ongoing investment in the food and fibre sector...

A sector with a high number of injuries and a poor record of providing good work will be unattractive to prospective investors. The Deliveroo IPO in March 2021 is a great case study: investors balked at the treatment of drivers and environmental, social and governance (“ESG”) risks significantly impacted Deliveroo’s value. ESG reviews are now often applied by investors as part of their analysis process to identify material risks and growth opportunities. To ensure continued investment the sector needs to ensure it provides good work to meet ESG expectations (this links with social licence).

If you care about continuous improvement and innovation ...

Innovation requires a “healthy” working environment to yield full potential, skills, competence and sustain a hunger for success. An environment that lacks psychological safety (where people are constantly hiding mistakes, apportioning blame or scared to make mistakes or take a risk) won’t support innovation.

4. Locus of Control



Table 25: Locus of Control

Our locus of control refers to the extent to which we feel we have control over the events that influence our lives.

If you believe that you have control over what happens, then you have what psychologists refer to as an **internal locus of control**. If you believe that you have no control over what happens and that external variables are to blame, then you have what is known as an **external locus of control**.

Your locus of control can influence not only how you respond to events but also your motivation to take action.

If you believe that you have control over what happens, you are more likely to take action to change your situation when needed. If on the other hand, you believe that the outcome is out of your hands, you may be less likely to work toward change.

When considering work design, it is important to remember that we do have significant control over outcomes. The research shows farmers tell themselves



some unhelpful stories (there is nothing they can do to control the risks) and expect people to be super human (never make mistakes).

The fact is the sector **can** take steps to design good work, including controlling risks and it needs to acknowledge that the power to do this sits with farmers.

There are some things over which farmers have no control or influence. It is important to accept this, making sure energy isn't wasted in this space.

Finally, there are some things farmers can influence, not control. It is important to understand what they are (for example, policy and regulation; people) and target energy strategically in this space.

It is important the sector recognises the interaction between fact vs story and locus of control and accepts that a lot of things are within farmers' control e.g. whether wearing a seat belt or installing a CPD. Farmers need to be encouraged and reminded to take responsibility for adopting an internal locus of control and doing what they can to positively influence the things within their control.

5. Growth vs Fixed Mindset

When attempting to change mindsets it is also important to recognise that the farmers in the Quadrant 4 "get it, do it" group have a growth rather than fixed mindset. These two types of mindset were identified by researcher Carol Dweck⁵⁴.

a) Fixed mindset

People with a **fixed mindset** believe a person's basic abilities, intelligence and talents are fixed traits. They believe effort is irrelevant: trying harder, using different approaches or investing time won't make a difference.

b) Growth mindset

Alternatively, people with a growth mindset believe abilities, intelligence and talents can grow with time, effort and experience. They believe effort influences success and will invest time and effort in developing capability, leading to higher achievement and ongoing growth.

c) Why is this relevant to creating good work and changing mindsets?

One risk is that people with a fixed mindset avoid failing at all costs. They have a fear of looking dumb because they do not believe that they can redeem themselves once other people look at them as being unintelligent. People with a fixed mindset will often act from a place of fear and be afraid of showing any weakness. Acting from a place where weaknesses are to be hidden makes these people difficult to work with. Mistakes are to be hidden or blame allocated. This creates a psychologically unsafe work environment, which will never result in thriving people.

People with a fixed mindset also find it easier to blame other people for their issues. If their employees are born with basic abilities, intelligence and talents which can't be changed, it's their fault if they fail to develop their capabilities at work. With a fixed mindset, it's the individual's fault for failing to develop their capabilities or injuring themselves.

People with a fixed mindset also find it hard to design good work – they will often take responsibility for everything on farm because they can't allow others to in case they fail. They also avoid trying new things so they don't have to face the possibility of failure. All of this limits their ability to engage their team, delegate tasks which allow them to manage their hours of work and levels of stress, or try new approaches which improve work design.



On the other hand, those with a growth mindset believe abilities, intelligence and skills can be developed with effort, learning, and persistence. Basic abilities are simply a starting point for potential. They don't believe everyone is the same, but they hold onto the idea that everyone can become better if they try.

Those with a growth mindset will invest time and energy in developing themselves and others. They'll be open to trying new approaches without a fear of failure. Failure is a chance to learn – if it doesn't work, they'll learn from the experience and adjust their approach. The Quadrant 4 “get it, do it” group demonstrate that if you want good work, thriving people and great farming you need a growth mindset. Indeed, Carol Dweck echoes that and says “if you want to succeed in any aspect of life, then you need to build a growth mindset”.

A growth mindset is particularly important when designing good work. To design good work there needs to be an assumption that people *can* improve their abilities, talent and knowledge and that growth and development opportunities need to be provided. Ultimately this leads to more engaged and motivated people and better outcomes as everyone on the team is constantly developing.

To help change mindsets it is important farmers understand the power and possibilities of growth mindsets.

6. What else do we need to change mindsets?

a) Credible and trusted connectors and relationships built on trust

The farming culture is relationships driven. Farmers learn best from other farmers and those who have credibility.

We need to think about who does the engagement – the messenger makes a difference

Whilst research shows that some farming businesses consult a ranges of sources when learning, some seek *information and advice **only** from **local** experts (accountants, government consultants and local suppliers such as rural merchants) and **local** farmers*⁵⁵. Farmers want to know: who are you? Why would I listen to you? What's your experience?

For farmers, credibility is highly valued and borne of personal experiences of agricultural life⁵⁶. Without such perceived credibility, any messages will fail to overcome the barrier of farmer autonomy. Thus messages developed by knowledgeable others (or experts) need to be authenticated by farmers, if we want those messages to be accepted. Although this is a challenge, it can be facilitated by community and industry collaborations.⁵⁷ Al McCone shared some great messages in his time as Engagement Lead at WorkSafe but his role as Regulator meant they weren't received as well as they could have been.

It is critical that the people trying to encourage “good work” are seen as someone who cares about farmers and farming, has strong credibility and invests in long term relationships. To make sure they can reach even the businesses that **only** access local experts, they need to be embedded in local communities.

Investing in relationships and taking a long term approach is critical. It takes time to do the foundation work to set up for success by building a relationship based on the mutual trust that is critical for successfully engaging in challenging conversations that change behaviour.

If the main resource is government project funding this comes with a lot of limitations. Often time frames are limited to funding for



1-3 years. In the context of culture change it may be hard to measure tangible results in the timeframes resulting in funding challenges.

Building relationships takes a long time and short funding horizons will not enable culture change. This challenge needs to be acknowledged and more innovative, long term funding (not tied to political cycles) needs to be available to enable better outcomes.

Patrick Lencioni's work on dysfunctional teams is a great tool for understanding why the "connectors" need to be the right people⁵⁸. As he notes, the foundation of effective team work is trust. There are four elements we need to establish in a relationship to build trust:

1. consistency;
2. compassion;
3. communication; and
4. competency.

Each of these four factors is necessary in a trusting relationship but insufficient in isolation. The four factors together develop trust.

To be successful as connectors people need to have:

- a consistent approach and temperament (non-technical skills). People need to know what to expect from their interactions and feel safe to open up and share.
- a strong empathy and compassion for farmers (non-technical skills). This requires a strong affinity for the sector. If this is missing, the results can be distrust and scepticism. A great example was the consultation process run by the Ministry for Environment on the Essential Freshwater policy, standards and stock exclusion regulations, which were released in August 2020. The related

consultation process ran through August and September, two of the busiest months in the farming calendar. The failure to demonstrate compassion for farmers eroded significant trust and undermined an already fraught process.

- competency (technical skills). They need to understand farm systems as well as their area of subject matter expertise. They require a good understanding of all the current and pending regulations, tools and solutions. They need the skills to be a generalist and director/filter of the increasingly diverse information farmers need. They need to be able to take a comprehensive helicopter view of the farm system, business and people, understand the environment in which it fits, directing and sourcing specialist skillsets as required to support the farmer. Most importantly these connectors need to take a holistic approach and recognise people as being of equal importance to other components of a farm system. Our connectors need to help people integrate good work design into their day-to-day activity.
- excellent communication and relationship building skills (non-technical skills). They need to be able to adjust their approach based on their audience and the wide behavioural preferences of their diverse farming stakeholders.



Case Study – Toroawhi Pilot – the power of trusting relationships and connectors

The Toroawhi pilot programme (a joint project between the Forestry Industry Safety Council and WorkSafe NZ) is a good example of the power of relationships built on trust. Two Toroawhi work across the North Island and, crucially, bring a considerable forestry background and experience of personal challenges which is critical to their credibility.

The Toroawhi travel to the geographically isolated worksites of the forestry crews, overcoming the time and distance barriers that often prevent access to support. They build relationships which they leverage to improve the health and wellbeing of the sector's workers. This includes providing support for forestry workers to improve their communication skills and get more confident to contribute to decision making and connecting them with support services tailored to their health and wellbeing needs.

<https://safetreenz.wistia.com/medias/r3x1dfckln>
<https://safetreenz.wistia.com/medias/kg1peacqea>

Table 26: Case Study Toroawhi

b) Diverse thinking

Diverse thinking harnesses the variation in approaches to problems and unique perspectives that arise from each person's unique identity, culture and personal experiences. Diverse thinking is important for innovation and continuous improvement. It helps us recognise and challenge our "stories".

Case Study – Grasmere Dairy/ The Lean Farm – diverse thinking, perspectives and skills

Patrick Lencioni's work found mutual trust in relationships enables healthy attitudes to conflict (the sharing of different opinions, an ability to work through differences,

remaining open to different approaches, innovation and continuous improvement).

In farming, relationship partners can often bring **diverse thinking**, perspectives and skills into the business and the mutual trust of the partnership relationship can enable innovation and powerful results.

Jana Hocken is a great example of this. Married to Matt, a 4th generation farmer, Jana is a Lean consultant with more than 17 years' experience working for Toyota and in Lean consulting. Jana is a strong advocate for lean on farm and uses her own farm as a case-study in how to design good work using lean principles. For more information visit

<https://theleandairyfarm.com/>

Despite its reputation, lean isn't about making people work harder or reducing the number of employees in a business. In fact, it's about engaging the team to:

- understand work processes in the 'current state'
- identify waste or opportunities for improvement
- re-design the process to create the 'future state', removing waste and frustration and embed process improvement
- standardise processes to support better quality outcomes, safety, efficiency and training
- redesign the work environment to support safe, efficient work and
- continuously measure key performance indicators to look for and incorporate improvement.

When someone begins farming from another background they don't bring the same "stories". They have different, diverse perspectives which enable them to be the naïve enquirer, questioning current practice and sharing alternative approaches. This can enable new skills, approaches and innovation to be leveraged and embedded in the business, increasing resilience, effectiveness and outcomes for the business, as Grasmere Dairy demonstrates.

Table 27: Case Study Jana Hocken, Grasmere Dairy



Case Study – Jessica Fraser, GM Aquila Sustainable Farming

Jessica is another great example of the value **diverse thinking** and **non-technical skills** can bring to the sector.

As an experienced Project Manager in the UK but with no farming experience she began her dairy farm management career in a policy role, supporting Aquila Sustainable Farming to gain organic accreditation.

A passionate and capable leader she's grown to General Manager and now has overall accountability for the largest organic dairy corporate group in the South Island of New Zealand.

Although her background didn't include technical farming skills (e.g. stockmanship, feed management) she's evidence that non-technical skills can be a solid foundation to add value as a sector leader.

Under Jessica's stewardship, the business won the Blue River Dairy LP Workplace Wellbeing Award in the 2021 Southland Business Excellence Awards, a category where agriculture is seldom represented.

In a sector not known for its focus on wellbeing and safety, this is an example of how, with diverse thinking and non-technical skills great leaders can establish a strong culture supporting thriving people.

Table 28: Case Study Jessica Fraser Aquila Sustainable Farming

c) Interventions which ensure risk tolerance isn't habituated

Investing in the next generation to change culture is critical. The research shows that risk acceptance and tolerance become habituated if children grow up seeing risky behaviours accepted as the "norm".

The value of investing in the next generation has been acknowledged in Australia, where the National Farm Safety Education Fund has allocated AUS\$1.6M for projects that aim to deliver on key impact opportunities including "investing in the next generation of farmers (child safety)⁵⁹".

Research shows that farmers are influenced in their safe work practices by the presence of children and wives⁶⁰. Leveraging the influence of children and young people to ensure they grow up with:

- a clear picture of what "good work" looks like
- an expectations that people are at the centre of work design and
- the understanding that work can be designed to ensure safe(r) outcomes

will support culture change by ensuring risk acceptance isn't habituated or normalised. The experience of changing beliefs and behaviours around seat belt use highlights the value of getting children on side as allies: as Sir Ian Taylor said speaking at Boma in 2021 *"I can still remember it was my kids coming home from school that made me wear a seatbelt"*.

Influencing children and young people is also an opportunity because NZ research found that for injuries occurring on farm **outside of farming activities**, youths aged 10–19 years had the highest number of events⁶¹. Influencing the beliefs of this group could help change culture on farm and reduce their immediate risk of harm or injury.



Case Study: WorkSafe and NZ Young Farmers partnership.

A partnership between NZ Young Farmers ("NZYF") and WorkSafe is another example of an innovative approach to changing behaviours through our young people.

The partnership initially ran for 3 years and has just been renewed for a further 3 years. WorkSafe support the NZ Young Farmer of the Year competition by providing modules for the regional events and grand final which include:

- Agri Kids – 8 -12 year olds
- Teen Ag – 13-18 year olds
- Young Farmers – 16 -31 years olds

These modules help participants understand the components of good health and safety on farm, including how to identify and manage risks.

Whilst the partnership improves the capability of our young people it also helps build awareness of what good looks like in their families and communities. The competition events are attended by supporters of all ages who engage with the content in a holistic way.

In an interview with the author WorkSafe's Ron Wood talked about the ability of this partnership to enable relationship building and knowledge transfer with multiple generations (young people, their parents, grandparents and other community members) including those who would not traditionally engage with messages around health and safety.

The benefits of the partnership are also recognised by NZYF's CEO Lynda Coppersmith who says "we need to start with young farmers if we want to change things for our future generations".

Table 29: Case Study NZYF & WorkSafe partnership

Case Study: Harriet Bremner

Harriet is a passionate health and safety advocate. She takes her message to children from 5-12 years of age including through her "Gurt and Pops" books and community events.

One of her most successful events in November 2020, reached more than 100 children who joined industry leaders to learn first aid training from the New Zealand Police and take part in eight on-farm modules. The modules aimed to build awareness of risks and teach skills to increase their safety including identifying blind spots around tractors, loading and stropping a trailer safely, learning how to use fire extinguishers and dressing up in the proper equipment to ride a motorbike.

"Being able to involve and engage with children directly about how to keep safe on farm in a hands-on perspective is such an important way for them to learn," said Harriet when I interviewed her. She encourages them to use their "think safe brain".

"The fact they get to take these messages home to their parents and have conversations to help change cultures and behaviours towards health and safety is incredibly important, not just for getting everyone home safe at the end of the day, but also for creating safer on-farm environments for everyone."

Harriet is currently seeking funding to extend a similar initiative across the country in partnership with NZ Police. The initiative is based on influencing the younger generation to instil passion for health and safety from a young age, take messages about the requirements for "good work" home to parents and family members and create safer farms for future generations.

<https://www.harrietbremner.com/>

Table 30: Case Study Harriet Bremner



With the right mindset (or "**why**") comes the right attitude to engage with the **what** and **how**; this creates the motivation for the right behaviours.

The next step is to ensure people are set up for "can do". How do we do that?



Chapter 5 - Setting up for “Can Do”: ensuring capability

Once people have the right mindset and want to create good work they need to be supported to ensure they are set up for “can do” (have the right capability). This is about moving people from Quadrant 3 to 4.

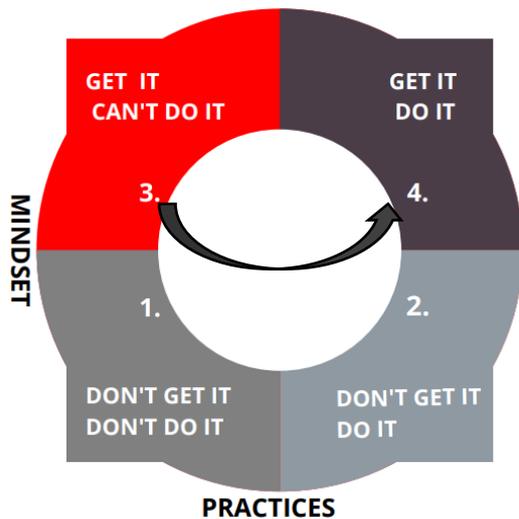


Table 31: Mindset and Practices Model, moving to the future state

The focus until now was compliance and education only approaches. I believe we need to go far beyond that to get change.

If people are to change their behaviour, they need to believe that they can succeed (**self efficacy**). Setting someone up for this belief requires more than telling them what they need to do.

When we don't get the behaviour we want from a person, we often blame them. We may assume they don't want to do it or they don't care/share our values. If we use root cause problem solving to work through our initial assumptions (or “stories”), we often find that actually, they “**can't do**” what we expect.

For people problems **Can't Do /Won't Do** is an excellent root cause problem solving

framework. This model was originally shared with me by Clinton Yeats⁶² of Yeats Contracting. Despite its value, the model doesn't appear to be widely known.

1. Can't Do/Won't Do

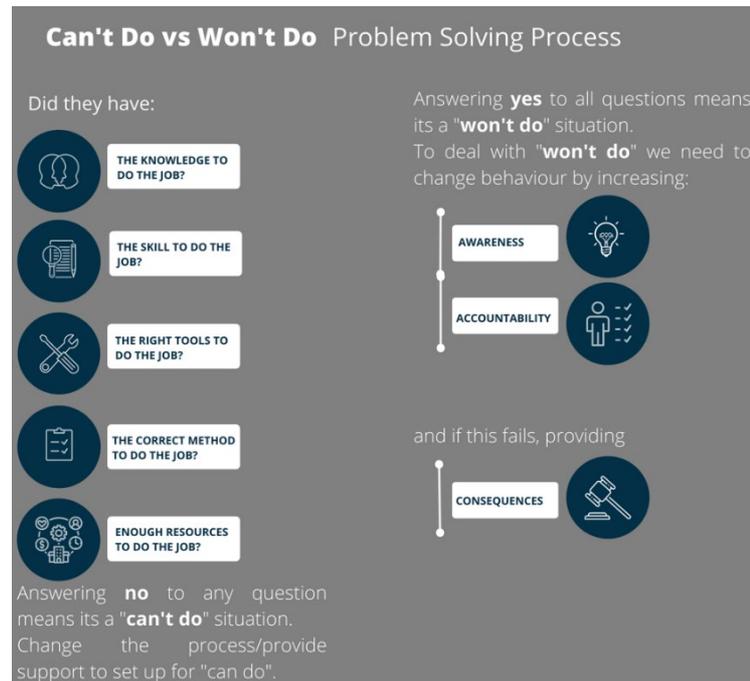


Table 32: Can't Do vs Won't Do Problem Solving Process

Establishing and understanding the difference between “can't do” and “won't do” is a game changer in people management at both a farm and sector level.

To use the tool we need to work through the first five “can do” questions and answer them yes or no (the answers are binary, there is no room for “sort of”). Answering “no” to any one or more of the five questions means the situation is one of “can't do”. We can't blame the person for the outcome, they haven't been set up for success. If we want a different outcome we need to be accountable for improving the



process/providing support to set up for “can do”.

Let's step through the process to see how it works.

2. Setting up for “can do”: Ensuring Capability

a) Knowledge: Did they have the knowledge to do the job?

Knowledge

Facts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject.

Oxford Dictionary

To be successful at a job or action, people need to know:

- **Why** they must do it.
- **How** they are to do it.
- **What** it is they are expected to do.

In this context the knowledge required is the why, how and what of designing 'good work' where:

- the risks are identified, eliminated or minimised so far as is reasonably practicable (using the **hierarchy of controls**, see below);
- the work design optimises
 - human performance
 - job satisfaction; and
 - productivity⁶³.

Providing people with knowledge is relatively easy (and is where the sectors' compliance and education only interventions have focused thus far). It's usually possible to answer this question “yes”. However, all five questions need a “yes” before a person is set up for can do.

b) Skills: Did they have the skill to do the job?

Skill

Practiced ability; expertness.

Oxford Dictionary

By definition (“**practiced ability**”), skills require practice. To practice effectively one needs support and feedback to work through any barriers, develop confidence and embed the new skill to the desired performance standard. Support needs vary and everyone is different. Some will require more practice, support and feedback, others will become skilled quickly on their own.

The **stages of learning** are useful as we reflect on this. It takes time to move from **Stage 1. Unconsciously incompetent** (unaware of the skill and your lack of proficiency) to **Stage 3. Consciously Competent** (able to use the skill with effort). Quadrant 4 businesses recognise this and allocate resources to educating/training people and then supporting skill development through mentoring, coaching, supervision and feedback/performance discussions.

By contrast, Quadrant 1-3 businesses often give people knowledge (tell them what they need to do, when they need to do it and how) and then expect them to instantly or quickly be skilled. There is no allowance for individual support needs and little feedback (constructive or positive) or supervision is provided during the developing stage; often, in fact, there is no allowance for “developing” and people are expected to move immediately from learning to skilled.

The root cause of this practice is often due to lack of awareness of the stages of learning together with a lack of resourcing. Many team and people leaders are too busy with operational matters (doing essential work) to spend time providing training, support and supervision for their



people. This issue arises from a critical people shortage due, in part, to government immigration settings alongside unhelpful beliefs about:

- the number of people required to the complete work
- acceptable hours and days of work
- the need for support/supervision for people

This needs to change. The story of what it means to be a great farmer needs to be rewritten to acknowledge that time spent developing people is as important as traditional operational farm tasks. The Quadrant 4 examples demonstrate investing in people and providing resources to support good work (acceptable hours of work, standardised processes, training, development, mentoring and coaching, great infrastructure and well maintained plant, equipment and vehicles) increases productivity, engagement, motivation and quality of outcomes. It also helps with attracting and retaining people.

As we consider skill we also need to ensure farmers are supported to develop the non-technical skills which will support good work outcomes. There needs to be a strong focus on skill development (rather than education only interventions).

c) Method: Did they have the correct method to do the job?

Method
Way of doing something, system of procedure.
Oxford Dictionary

The correct method for a job, specific to the farm context is an important component of setting farmers up for success.

In many situations it isn't clear to farmers what the correct method is. Telling farmers they need to get better at managing risks on farm is not enough. Bearing in mind that

most things they are doing don't feel risky to them, what specifically do they need to do? What does good look like? This needs to be spelt out. "People often use words farmers don't understand. Rather than saying use [good risk management]" say "[good risk management] is x, y and z". Be explicit about it.⁶⁴

There can be tension around this due to the Act being very non-prescriptive. However, there is a real opportunity for the sector to collaborate and agree on what "good" looks like (or key risk controls) to set clear expectations and show leadership.

This will make life easier for farmers, many of whom want to do the right thing but find it difficult because they don't know where to start.

Getting clear on what "good" looks like is also very important for empowering people. If they understand what good work design looks like for key risk controls, they will be able to identify whether their employer/principal is operating at best practice. This will empower them to decide if the workplace is right for them.

Upstream duty holders (those that supply the plant, equipment and vehicles that create risks on farm) need to provide support. It shouldn't be up to farmers to design the method for controlling the risks others create.



Case Study: FMG's vehicle training

FMG's side-by-side and quad bike vehicle training programme is an example of what training targeted to set farmers up for "can do" can look like.

FMG understand the RMPP research on farmers' preferred learning styles and the need to ensure training is activity based.

The training is focused on experienced operators (many of whom have had no formal training about the vehicles they are operating). Participants bring along their own vehicle (so the training is relevant to their particular vehicle) and credible and experienced experts with affinity for the sector provide practical training on how to manage risks (including pre operational checks, active riding techniques and what to do when things go wrong).

This ensures farmers know the correct "methods" and are supported to develop their "skills" as well as their "knowledge".

The participants are also provided with relevant "tools" (e.g. tyre pressure gauges).

Table 33: Case Study FMG quad bike and side-by-side training

d) Tools: Did they have the right tools to do the job?

Tool

A device or implement... used to carry out a particular function... a thing used to help perform a job.

Oxford Dictionary

For "can do", people need to have access to the right tools.

The **hierarchy of controls** is an important resource here, which is not well understood in the sector.

i) Hierarchy of controls

The **hierarchy of controls** sets out the process for managing identified hazards and risks in work through 6 levels of possible intervention, with elimination being the most safe (and requiring the least amount of human management) to the introduction of personal protective equipment (the least safe intervention with the highest need for human management)⁶⁵.

The resources provided by Beef & Lamb and WorkSafe NZ (DairyNZ uses these) provide no detailed discussion of the hierarchy of controls or how it might apply in the farming context. Rather farmers are told simply to eliminate or minimise their risks. If we consider the **stages of learning** and that many farmers may be unconsciously incompetent (unaware of what they don't know), this fails to set them up for success.

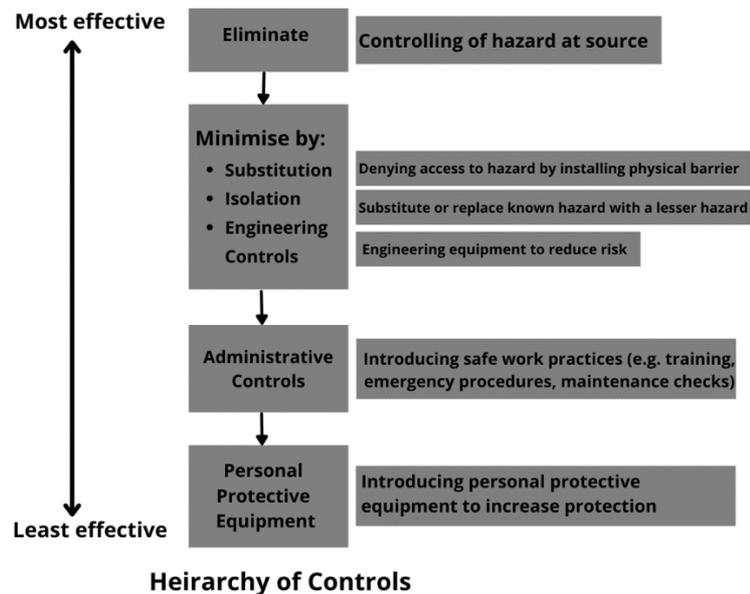


Table 34: Hierarchy of Controls

Understanding the hierarchy is important because the sector is currently focused on less effective means of control e.g. on personal protective equipment ("PPE") and administrative controls. PPE is at the bottom



of the hierarchy of controls because it is the least safe intervention: the risk still remains and PPE relies on humans to store, wear and maintain it properly at all times.

Relying on PPE and administrative controls also perpetuates the belief that farmers are **super human** and expected not to make mistakes. Farmers need help to understand the hierarchy of controls, identifying the full range of control measures and implement interventions that are more successful at controlling risk to create safer work that enables people to “fail safely⁶⁶” if they make mistakes.

“We need to make sure that if people fail, they fail safely” Mike Cosman⁶⁷

A significant problem is that up-stream duty holders (those supplying plant, equipment and machinery) do not set farmers up for success by providing the tools to manage the risks their products present. An example is lock out devices for equipment on farm. Many farmers use lower level controls to control the risk of accidental injury or death during the maintenance or repair of common farm equipment e.g. augers (in grain silos). This might include telling people the item is being serviced and not to turn the machine on. This type of control doesn't allow for human error (e.g. turning the item on whilst someone is working in it either due to miscommunication or mistake). Unfortunately, this has happened on several occasions⁶⁸ It should be possible to:

- create an industry wide best practice lock out procedure for common items of equipment and
- easily access the lock out devices (engineering controls) which ensure common machinery can be locked out from its power supply during repairs and maintenance.

At the moment there is no best practice method for this task and finding the tools (engineering controls) to lock out the

machine is a barrier, requiring a trip to a specialist shop which may, or may not, have a product suitable for the equipment.

Tools need to be readily available (for example, stocked in farm supply stores) or provided by those in the supply chain who supply, distribute or sell the item which creates a risk, together with advice for controlling the risk.

e) **Resources: Did they have enough resources to do the job?**

Resources

A stock or supply of money, materials, staff and other assets that can be drawn on by a person or organization in order to function effectively.

Oxford Dictionary

Farmers are under incredible pressure. Most are small to medium sized businesses or family owned and operated. They have limited resources. The pace and scale of change currently expected of them is exhausting and unsustainable. Research is clear that stress is a strong cause of accidents and injuries in the sector⁶⁹.

Farmers have little (psychological) capacity for further change. Leadership fatigue at the highest levels of the sector is acknowledged⁷⁰ but the problem is also evident at farm level. The innovators and fast followers have been required to make significant changes over the past decade; often they are also the ones required to step up and lead. Their capacity to do more is limited. Any changes advocated must be manageable and safe i.e. available for uptake at a pace and time that suits the individual. Building future leadership capability and supporting current leaders remains critical.

Chronic labour shortages are also having significant impact. The closed border has exacerbated the existing people shortage. There simply aren't enough people



available in the geographic locations where farms are located to fill the necessary gaps. Farmers need support to ensure they can access the people required to enable good work. If we want to set up for “can do” farmers need adequate resources.

Finances may be a barrier for some farmers, depending on the change required. However, many of the suggested changes are low or no cost and require only an investment in time (attending training, making changes to existing processes etc). Time is far more likely to be a barrier and must be considered when designing interventions.

Common sector practices (e.g. engaging sharemilkers or contract milkers) may also impact the availability of resources. All duty holders (people with a legal responsibility for health and safety) **must** share responsibility for managing workplace risks including providing adequate resourcing for good work design through contracts for services (including contract/share-milking agreements).

f) **Setting up for can do: How might this look in practice?**

Hazardous substances management is a good example of how setting up for can do might look in practice. Occupational disease caused by airborne exposure to harmful substances such as chemicals was identified as the primary cause of death in a one off 2016 WorkSafe report, with an estimated 97 deaths and 670 hospitalizations in 2010. Nonetheless hazardous substances, though common on farm, receive very little attention. To set people up for “can do” would require:

1. **Knowledge** – ensuring they understand the “why” for managing these substances. As harm doesn’t manifest immediately, it can be easy to overlook. Farmers also lack awareness of the risk to others (workers, children, emergency services workers e.g. fire fighters).

Ensuring they understand the what and how e.g. how to apply the hierarchy of controls to eliminate unnecessary risks or substitute products to minimise risk; How to isolate (store) the products correctly; How to use engineering controls (e.g. automatic dispensers or spray nozzles which prevent wide dispersal) to minimise risk; How to safely prepare, use and manage the product; What the requirements are for a hazardous substances register, safety data sheets etc; What type of PPE is required and how to correctly use, store and maintain it.

2. **Skill** – The FLINTS identifies a number of non-technical skills which are required to properly manage hazardous substances. Some of these are task specific (e.g. task management, organising resources and infrastructure including ensuring hazardous materials are locked away). Other skills are transferable and ensure good engagement and consultation (e.g. leadership, directing/guiding task behaviours; team work and communication, co-ordinating with others). Supporting farmers to develop these skills is important.

3. **Method** – There are a number of processes required to successfully manage hazardous substances. Creating clear, practical methods and sharing these with farmers so they know what to do is important. For example, there are a number of requirements for safe storage and handling of hazardous substances, including bunding. There are low/no cost, practical ways of managing this (for example, cutting down a 200l drum and storing smaller containers of compatible chemicals inside there); identifying relevant “methods” and sharing these with farmers is important.

4. **Tools** – there are some tools which are required to safely store and manage



chemicals. A great example is signage. A special regulation⁷¹ for premises where milking animals are milked (all dairy sheds) sets out the specific requirements for dairy farms. It should, for example, be possible to buy this sign from all major farm supply shops or have one provided by those that share the duty to control the risk of these products (e.g. suppliers).

5. **Resources** – most farmers don't have expertise in hazardous substances management but are supported by stakeholders and upstream duty holders who do. Leveraging that support and expecting it to be provided is a big opportunity. Product suppliers should, as part of their duties and the chain of custody, ensure that farmers are set up for "can do" when they provide their products. This wouldn't be hard (suppliers should ensure they are supporting farmers to use the correct product for their needs, with the lowest possible risks; that the right information (SDS), tools (signage, spray nozzles, storage, bunding) is available; that the method for using and managing the product is explained and clear. This doesn't happen comprehensively or consistently. Suppliers may, instead, actually create unhelpful situations inadvertently (for example, by delivering all chemicals required for a dairy season at once, which triggers more onerous obligations for the farmer).

g) Summary - establishing "can do"?

Answering yes to all five questions identifies the individual, sub group or sector is set up for success or "can do". But what if this still isn't resulting in the right behaviours?

In that case the issue is "won't do".

3. Dealing with Won't Do

To deal with a "**won't do**" we need to raise **awareness** of why the behaviour is important, what the expected standards

are and how to achieve them. We also need to increase **accountability**. If that still doesn't work, we need **consequences**.

Currently, the sector spends the majority of its time trying to shift people in Quadrant 1 (don't get it, don't do it). These people are "laggards⁷²". They move only when it becomes too painful or impossible not to.

To deal with "won't do" and leverage the best response the focus should instead be on:

- Quadrant 3 (Get it/Can't Do It): this group is already motivated to change because they have a strong "why". What they need is support to set them up for "can do" so that they can improve their practice.
- Quadrant 2 (Don't Get It/Do It): this group is important because they are largely motivated by fear. They don't want to get a fine or get caught doing the wrong thing. Because they don't have strong "why" for their behaviour, they lack commitment. If they think they won't get caught, they'll revert to doing things the wrong way. *"Behaviour change to avoid non-compliance costs may work in the short term, but cultural change – belief in the benefit of the behaviour change – will not be affected⁷³"* so this group is constantly at risk of moving to Quadrant 1 (Don't Get It/Don't Do It) without the right support and consequences.

a) Increasing awareness

One of the best ways to improve awareness of the importance of good work is to change social norms.

This requires aligned and collaborative leadership across the sector, from farm level up. SaferFarms, the non-profit



Agricultural Health and Safety Leaders Action Group could be well placed to coordinate and lead this.

To increase awareness requires:

1. A clear vision that inspires and excites stakeholders. What do we want our sector to be like? This vision needs to recognise the diverse range of stakeholders and that farmers are not a homogenous group. Although this project suggests a compelling vision could be "**Good work, thriving people, great farming**", this isn't good enough. Engagement across the sector is required to create a vision that everyone can buy in to. Addressing health and safety indirectly may be more effective and engage farmers by selling something they need or desire.
2. Making the vision come alive. The sector needs to own the vision and cultivate the qualities required to make it come alive. This may involve putting aside unhelpful stories, acting based on facts and cultivating a growth mindset and internal locus of control. Farmers should recognise that whilst they are super heroes, they aren't super human.
3. Leadership at farm and sector level from people who will own the vision. These leaders need to inspire trust, be credible and encourage the belief that the vision is attainable to get the required buy-in from stakeholders.
4. Clear goals which articulate what will happen over the short, mid and long term (the pathway and actions required to work towards the vision).
5. Consistent and continual **communication** to stakeholders about the vision and key messages about the pathway and actions required to achieve it. This is not a one-off exercise

and must be vigorously pursued until the vision is achieved.

b) Communication

Communication is a key component of raising awareness, requiring a sector communication plan focused on influencing attitudes and behaviours, articulating the vision, pathway, goals and progress.

The sector communication plan needs to deliver key messages aimed at influencing mindset to get a change in behaviour. Communication will be most effective when everyone involved; organisations; levy bodies; professional associations and businesses in the sector are joined up, speak with one voice and carry the same message about what good work, thriving people and great farming looks like.

i) *Are words the best form of communication?*

Print is currently the main channel for communication. It is important to consider whether traditional communication channels (e.g. articles in print) engage the desired audience. There have been some great articles by WorkSafe about the importance of health and safety for good business, but they are text heavy and, as I've already discussed, the messenger affects the credibility of the message (farmers have a natural distrust of the regulator).

The UK's experience is that visuals are key and a partnership approach can amplify activity⁷⁴. Pictures are also generally far more impactful than the written word or being told. Exploring more visual ways of communicating is important to getting the message across⁷⁵. There should also be an aim to simplify complex information by using visual products such as infographics and video.

Our industry bodies and stakeholders need to actively promote good work design



messages holistically in their communications as an integral part of "great farming". Their communication should align around key messages, rather than take a fractured approach. 2-3 key messages communicated consistently and frequently by all stakeholders and those in the supply chain (e.g. levy bodies, milk and meat processors, farm service providers, manufacturers, sellers) would be ideal. This approach acknowledges the research on how farm businesses seek information before making changes⁷⁶ and the need to ensure consistent messaging from a range of local experts (private consultants, buyers, government consultants, financial advisers), farmers or farmer-directed groups, agricultural associations and organisations, media (including industry magazines and the internet).

Working with key partners (i.e. not the regulator) who are a trusted voice with the target audience, also helps to extend the sphere of influence of communications activity beyond those already engaged in the conversation.⁷⁷ FMG have shown how this can work, leveraging their status as a mutual with strong agricultural affinity to influence.

Communication also needs to recognise that farmers are individuals; crafting communication that incorporates various mediums and is tailored to different generations and sub sectors (dairy, sheep and beef, deer etc.). This includes releasing content across multiple channels and formats so people can engage in a way and at a time, they prefer.

Depending on the audience, content may need to be translated into other languages (recognising our multicultural workforce).

ii) Design of safety messages

To be successful, awareness raising communication needs to encourage farmers to embrace good work practices

that mesh with their existing motivation – to ensure that they are efficient, successful and profitable.

Casting health and safety in the language of good work, thriving people and great farming is not about forgetting the moral argument for keeping people safe and healthy, but about framing the argument in terms that are understandable and relevant to the audience, many of whom are turned off by health and safety due to previous experiences.

Research show narrative based and fear messages in combination were evaluated more favourably by farmers than messages that simply inform or utilise statistics to create scenarios for change⁷⁸. This should be considered in the sector communication plan. Any campaign that utilises fear must contain four elements:

1. The creation of perception of a threat (which could be achieved through referencing fact vs story)
2. Demonstration of the severity of the problem/its consequences (which could be achieved by farmers story telling based on their own experiences)
3. Demonstrate how to avoid this threat (a call to action) and
4. A course of action for the receiver of the message (what specifically do they need to do next? (the method)).

Without any one element, the message will fail to be effective or persuasive⁷⁹.

The safety messages do not need to be complex, but all elements of this communication must be woven together. Messages need to touch on farmers' reserves of resilience, self-reliance and ability to be innovative in ways that suit their circumstances. They should also hit at their sense of community and family and care for people⁸⁰. Research shows that people are much more likely to take action and be involved in strategies and take on change



aimed at benefiting the health and safety of those around them if they care about the people affected by their intervention⁸¹.

(iii) Story Telling

FarmStrong has experience in trying to change farmer wellbeing behaviour and acknowledges: *"Behaviour change takes time. Attracting and supporting farmers to share their wellbeing stories, tips and advice with other farmers has been key to making progress. You need to be realistic about the time frames and what you're expecting out of the programme"*⁸².

Sharing stories of positive change is important to developing self-efficacy. Farmers want to know: are my neighbours or peers doing it? Story telling can be leveraged to connect with them.

Story telling needs to include multiple touch points and recognise farmers are not a homogenous group. Identifying leadership of good work design on farm and telling the story is the desired outcome. This will recognise those doing well and things being done well and help disseminate successful ideas and strategy through the sector (sharing solutions and changing social norms).

When telling positive stories it is important to show realistic examples. In my discussion with farmers it became clear that anyone too perfect or too far ahead on the journey is problematic. Whilst identifying leaders in good work design and applauding their behaviour is important, the stories shouldn't alienate anyone e.g. individual or small owner operators, or those at the beginning of their good work design journey who may perceive that they are not in the same league and do not have the capacity/resources to be successful. Providing examples of the spectrum of good work design is important (from small changes to bigger ones: the focus should be on low or no cost changes). It is also important to focus the story on the journey

(not the destination). What did they think and feel about this? What prompted them to change? What was the first small step they took? What was hard about that and how did they work around it? How exactly did they make the change?

Increasing appreciation of the consequences of poor work design via storytelling is also important in raising awareness (e.g. having a farmer who has experienced an accident talk about the impact and what they would do differently if they had the chance, particularly any "stories" which they now recognise as unhelpful or damaging). Dr Amy Irwin explained that these near miss examples are often more compelling than examples of a fatality. It is easier to blame a fatality on inexperience or lack of capability whereas a peer explaining their near miss is more identifiable and harder to ignore (particularly if there is recognition of shared behaviour or beliefs/assumptions in their story).

Caution is required with story telling as some research shows that people adjust their beliefs on the basis of good news rather than bad or negative information⁸³. Consequently, the positive stories (talking about the benefits experienced e.g. saved expense, less absenteeism, better retention) or examples of how altered work design has brought positive outcomes will likely be more successful.

c) Changing social norms

*"Peer pressure and social influence can play a significant role in influencing and individual's attitude towards compliance"*⁸⁴. As this report explores, social norms (risk habituation and normalisation of bad work design) negatively influence sector outcomes.

The communication plan needs to establish that good work design to foster thriving people is a choice and an attribute of a



successful (great) farmer. It needs to build new social norms.

To change behaviours we need to leverage everyone. *“Our theory of change is that farmers will alter their behaviour because they see other farmers doing something that works to make them a better farmer.”⁸⁵*

To change social norms, the communication plan needs to recognise that there are already influencers active in the sector (particularly on social media) who can be leveraged. However, they may inadvertently be perpetuating the social norms we are trying to change (e.g. using quad bikes with no CPD and whilst carrying passengers; carrying young children unrestrained and/or without helmets in side-by-sides and tractors). It is important that the communication plan includes an investment in relationships with key influencers, building trust to influence their practice and help them identify opportunities for improvement so that they engage with and amplify new safe (r) social norms.

d) Consequences

The last component of dealing with “won’t do” is consequences. The Act provides significant fines and/or the possibility of imprisonment for those who fail to meet their duties.

However, the farming sector is fragmented, with many operators. The nature of its geographically isolated farms means they

are low surveillance. There is a low chance of being caught flouting the rules, particularly as WorkSafe inspectors cover a wide and diverse geographic area.

Farmers are, in fact, more likely to harm or kill themselves or someone close to them than be prosecuted. “Stories” which play down the risk of harm and susceptibility to risk mean they are unlikely to change behaviour based on fear of the consequences.

Research concludes lack of consequences can reduce likelihood of change. Research in a similarly fragmented industry (the Australian fishery) concluded that *“consequently, where in other industries, cultural change may take two to eight years, it is to be expected that cultural change in the fishing industry will take significantly longer – and may very well be reliant on generational change.”⁸⁶* The sector need to acknowledge the challenge of lack of consequences and the impact on timeframes when designing and funding interventions.

Changing social norms and mindset may be more effective levers. Although it will take longer, rewriting the story of what it means to be a great farmer will leverage the power of belonging. Those who want to be great farmers will want to adopt the characteristics associated with this (e.g. designing good work for them and their team). Farmers generally want to know: are my peers doing it? This desire to “belong” may be significant enough to drive the desired behaviours.



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Chapter 6 - Conclusion

A, he teitei awatea, kei te po na noa te hakahaka

It may be daunting but it's not impossible

Following my research, my view is that interventions aimed at changing farmers' approaches to health and safety to date have been "education only" tools and support aimed at the "symptoms" of the problem. They haven't fully understood the underlying or "root causes" of farmers' health and safety behaviour. This is an issue, because addressing "symptoms" will not resolve the problem. This could explain the lack of significant and sustained change in outcomes and culture, particularly since the introduction of the Act.

Although New Zealand research into farmers' attitudes to health and safety is limited, the available international research clearly identifies a significant number of unhelpful underlying beliefs and assumptions. These are the drivers of farmers' behaviours or practices. In short, farmers believe they are super human. To really change culture and behaviour it is important to address this mindset.

Identifying the difference between "facts" and "stories" is critical. Too often farmers only understand that their beliefs are "stories" after a tragic outcome. The sector also needs to tell a strong story around the ability to design good work which not only controls risks to make work safe(r) but also creates more productive, profitable and enjoyable workplaces and secures New Zealand's place as a sustainable food and

fibre producer which cares for people in the way its customers expect. It is important that the benefits or "why" are socialised across the sector.

Changing mindset requires an emotional connection with a strong and compelling vision. This connection needs to establish the "why" or "what's in it for me" for the individuals who need to change. To date, health and safety has been pigeon holed as a "compliance" issue. The compelling benefits haven't been articulated in a way that connects with the diverse motivators for individual farmers. The value of good work needs to be better explained (greater productivity, less turnover and absenteeism, better people outcomes, lower insurance and other costs) to demonstrate a strong and compelling "why" which will motivate change.

There also needs to be a change in story telling to identify the importance of an internal locus of control and a growth mindset. Whilst the perception/story is that accidents can't be prevented, people can't be developed and work can't be designed to be safe(r) or have better outcomes for farming people, the facts say otherwise. Most harm is preventable and farmers need to focus on things within their control including designing better work and developing skills and capability.

To change the social norms that prevail, there needs to be concerted effort to change the "picture" of what good farming looks like. This requires cohesive communication across media (print, social). It also requires intervention before risks becomes habitualised. Leveraging children and young people is critical to



ensure they understand what good looks like before they embed their own unhelpful stories or beliefs. This is why work like Harriet Bremner's and the role of New Zealand Young Farmers is so critical and needs to be supported.

In addition to providing support to change mindsets around the value of good work, it is important that the sector sets people up for "can do". My findings show that setting up for success is a complex process and that what may appear a "won't do" is often due to a lack of knowledge, skills, method, tools or resources. As the report highlights, everyone has a part to play in supporting farmers to lift their game. This includes our customers (who signal their expectations around ESG requirements), the supply chain, our levy bodies and other sector stakeholders. More is also required of upstream duty holders: those who provide the products, equipment, tools, machines and vehicles that create risk in farm workplaces.

Although it is important to involve and engage farmers in co-designing "what good looks like", they are **not** best placed to identify the best tools or method for controlling many of their workplace risks *without support*. Those who create the risks in workplaces (for example, through supplying products, plant, machinery and vehicles) need to collaborate with their stakeholders and ensure they provide the information, method and tools to control those risks and set up for good work. These solutions need to be practical and relevant to the farm context.

As a result of my research, I also believe the sector needs to value non-technical (cognitive and social) skills as highly as technical skills. The work of the Forum and Dr Irwin highlight the value of non-technical skills for good work, thriving people and great farming. Non-technical skills are undervalued in the sector and I believe there needs to be investment in their development to:

- Enhance work design
- Optimise:
 - Safety and health
 - Human performance
 - Job satisfaction and
 - Productivity.

Until now, training has focused on technical skill development in the health and safety context. As this report explains, the sector needs to support farmers to develop and enhance competency in non-technical skills to enable a real shift in culture and outcomes. Better non-technical skills will result in a win: win: win:

- Good work which provides a more productive, effective, enjoyable and safe work environment
- Great Farming - farmers who can develop their people successfully, set them up for success, delegate, share responsibility for farm outcomes (reducing their levels of stress and allowing them a better work/life balance whilst also providing more meaningful work and autonomy to their people), greater team engagement, higher productivity and better quality work outcomes
- Thriving People – better non-technical skills will support safer and healthier work environments which will help attract and retain the best people. The biggest advantage of non-technical skills is their ability to influence not only health and safety outcomes but also wider improvements in consultation, engagement and collaboration between people in the sector, unleashing people potential and innovation.

Whatever interventions or support are provided need to enable safe change, at a pace and scale and in a format that enables farmers to engage in a way that



suits them, their needs and available resources.

As this report highlights, the sector also needs to come together and lead on identifying and communicating:

- The vision for the sector
- The benefits, “why” or “what’s in it for me?” of good work design and
- Key risks and risk controls or “what good looks like”.

This communication needs to happen in a way that connects with farmers. Research shows this isn’t normally text heavy and there is opportunity to consider use of visuals and multiple channels which connect with the diverse audience in a way that works for them. Safer Farms is in a good position to lead this process and connect the varied sector stakeholders with a common voice.

To be successful it is important to engage with all stakeholders and, as my research shows, the younger generation have a key part to play in changing culture. It is critical that any consultation process includes their voice and therefore I highly recommend that NZ Young Farmers are engaged as the representative for this demographic.

In my view the sector should identify 2-3 key messages which need to be consistently

and frequently communicated by all our stakeholders and those in our supply chain. This will ensure the key messages are embedded and transferred at all stages of the sector (including at a local community level). This approach acknowledges the research on how farm businesses seek information before making changes which identifies that whilst some look/consult widely, others will only learn from local experts (either other farmers or rural professionals).

Setting clear expectations will also begin the process of changing social norms. As explained, attitudes of risk are habituated because “everyone’s doing it”. This needs to stop. The sector needs to lead by deciding what “good” looks like and communicating this in a way that rewrites the story of what great farming and farmers looks like.

Finally, a cohesive communication plan needs to leverage and amplify those already active (e.g. farming social influencers). Building strong relationships with these people to help them identify what good looks like and promote good practice is an important component of a successful strategy.



Chapter 7 - Recommendations

To make real change there are a number of recommendations arising from this report.

1. Recommendations for farmers

At an individual level, farmers need to:

- a. Recognise the risks inherent in farm work. Identifying the difference between **fact vs story** is key. Some tightly held beliefs (stories) are unhelpful at best, damaging at worst. The facts show objectively what is most likely to hurt, harm or kill and there are recognised ways to control these risks which are generally low or no cost. However, they require farmers to recognise that whilst they are super heroes (juggling many hats and producing nutritious food and high quality fibres) they are not super human. Designing good work will help people thrive and, if they do make a mistake, to fail safely.
- b. Identify a strong “**why**”. If looking after people isn't enough, there are other benefits of good work design (including increased productivity, protection of social licence, lower insurance costs, better engagement and work outputs). Whatever an individual's motivation, there is a compelling reason to get engaged in good work design.
- c. Implement and model best practice work design based on known solutions (facts not story, focusing on factors within their **locus of control**, utilising the highest level of controls for risks based on the **hierarchy of controls**).
- d. Acknowledge that in some cases work design (something within the sector's locus of control) creates staff turnover, costly cycles of training each season and poor outcomes for people, including lack of engagement, hurt or harm, lack of growth and development.
- e. Engage in learning about better ways to do things: talk to neighbours, discussion groups, rural professionals about why you want to design good work and see what they can do to support you or share ideas. People need to be at the centre of decision making and as important as other aspects of farming (production, profitability and environment). Look after people and the rest will look after itself.
- f. Do what they can, when they can (resources permitting) to provide good work. Remember most changes are low or no cost.
- g. Lean on suppliers, stakeholders and upstream duty holders to **expect them** to help control the risks they create, including by providing knowledge, tools and methods.
- h. Value **diverse thinking** and skill sets. Technical skills are important but **non-technical skills** are just as important and have been undervalued by the sector (so have the people who bring them).
- i. Invest in self awareness and personal development, particularly to develop non-technical skills.



2. Recommendations for the sector

At a sector level, leaders, stakeholders, levy bodies and up steam duty holders need to consult, cooperate and collaborate to:

- a. Understand the **root cause** of behaviour, including research about how farmers think and what this means for health and safety. Commissioning New Zealand specific research to confirm the international findings may be beneficial.
- b. Create a **vision** for the sector which is really compelling (given the other findings of this report, it may need to address health and safety by stealth, focusing instead on speaking to other issues which are particularly relevant to farmers e.g. their desire to address people problems and get the best out of people).
- c. "Sell" the vision through an action plan which identifies a small number of the biggest priorities for the sector (two to three) and sets out a clear **action plan** for the steps required to move towards this vision.
- d. Lead with the "**why**" or "**what's in it for me**" instead of the "what" and "how" when communicating the vision, designing interventions, providing support and story telling. This is important to ensure that the Taskforce's feedback is incorporated into solution design (that training addresses the reasons for the behaviours as well as the behaviours themselves).
- e. **Consult and collaborate** with **everyone** in the supply chain and wider sector to take an outcomes based approach to improvement. This includes coming together to create the vision and action plan and set farmers up for success.

Including NZ Young Farmers in the consultation process is critical to ensure engagement with the next generation.

- f. Be brave and "**lead**" by identifying what "good looks like" or the standard that should be expected (i.e. identifying why, how and what great farmers need to do, ensuring the method is clear and that the necessary tools and resources are available to support this).
- g. Understand **Can't Do/Won't Do** and the **Stages of learning** and apply them in solution design including a review of communication, support, training and development offerings.
- h. Value people and **non-technical skills** equally with profitability, environment, production and technical farming skills, taking a holistic approach to farm systems.

Based on the research I've outlined, my recommendation is also that the sector's approach to training, support and extension:

- a. Moves away from a focus on compliance and education only.
- b. Recognises that developing skills takes time and can't happen in a one-off training event. This will require more resourcing and ongoing support as farmers develop their skills and embed them but will result in more enduring and sustainable outcomes.
- c. Increases self-awareness of self-limiting beliefs e.g. using tools like "fact vs story", fixed v growth mindset, locus of control and the stages of learning.
- d. Recognises that farmers are not a homogenous group and uses a multi dimensional approach that speaks to



their different motivations, drivers and needs.

- e. Recognises how farmers like to learn (e.g. drawing on the work of the **RMPP** which identifies that farmers learn best from experiential, interactive learning and that they learn best from other farmers, with experts available to enhance, broaden and deepen understanding).
- f. Targets children and young people, supporting them to develop a strong “why” for looking after themselves and each other from an early age and a clear picture of “what good looks like” before they develop risk acceptance/habituation and create unhelpful stories.
- g. Provides funding which recognises change will take time and outcomes may be difficult to measure initially. This funding needs to be available for long enough to get cultural change in a fragmented sector and should be unattached to political cycles.
- h. Investigates the opportunity for non-written approaches to knowledge / technology transfer and develops visual, experiential and interactive alternatives as appropriate.



References

References are included in the end notes to the report.

The following books were generally informative:

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Appendix 1 – Semi-Structured interviews

Thank you very much to all these people who generously gave their time to share their experiences and insights through semi-structured interviews:

1. Ewen Kelsall (Federated Farmers, Senior Policy Adviser)
2. Pete Frizzell (FMG, GM People and Culture)
3. Jason Rolfe (FMG, Head of Client Strategy and Advice services)
4. Stephen Cantwell (FMG, Manager Advice Services)
5. Karen Williams (Federated Farmers National Vice President, Board Member Safer Farms)
6. Tony Watson (ex GM Safer Farms)
7. Shane Bird (Ag Mindset Coach, Australia)
8. Fiona Ewing (National Safety Director, Forestry Industry Safety Council)
9. Gerald Vaughn (FarmStrong)
10. Alex Thomas (Plant a Seed for Safety Australia)
11. Francois Barton (Business Leader's Health and Safety Forum, Executive Director, Board Member Safer Farms)
12. Mike Cosman (Cosman Parkes, member of the Independent Taskforce on Workplace Health and Safety)
13. Nicky Barton (WorkSafe, Team Lead Media and Kellogg Rural Leadership Programme: Old Dogs New Tricks: An exploration of age and its influence on health and safety in New Zealand's primary sector)
14. Al McCone (WorkSafe NZ, Engagement Lead)
15. Jamie Callahan (FarmSource, Technical Sales Manager, Kellogg Rural Leadership Programme: Improving our on farm health and safety culture in rural New Zealand)
16. Mark Ogilvie (Pamu, Head of Health, Wellbeing and Safety)
17. Liz Shackleton (DairyNZ, Biosecurity Manager)
18. Marcus Gatara (Ospri, National Manager Health, Safety & Wellbeing)
19. Penny Clark-Hall (Social Licence Consulting, Kellogg Rural Leadership Programme: How to earn your social licence to operate)
20. Harriett Bremner (Raw Truth podcast, author and campaigner)
21. Ollie Knowles (DairyNZ Southland, South Otago Regional Leader)
22. Dr Amy Irwin (University of Aberdeen, Lead of the Applied Psychology and Human Factors research group) Lead of the Non-technical skills in agriculture research group
23. Ant Sutherland (Sutherland On Farm Solutions, Agricultural Health & Safety expert)
24. Callum Eastwood (DairyNZ, Senior Scientist)
25. Sarah Watson (PeopleMAD)
26. Tangaroa Walker (Farm 4 Life)
27. Rebecca Miller (Kellogg Rural Leadership Programme: Is there a need for an information platform to collaborate primary sector events)
28. Louise Cook (Southern Research and Demonstration Farm, GM)
29. Alex Hunter (Roslin Consultancy)
30. Ed von Randow (Craigmore Sustainables, Pod Manager)
31. Stuart Taylor (Craigmore Sustainables, GM Farming)
32. Tony Robertson (The Genesis Group)
33. Gretchen McFadden (Evolutio)
34. Tracey Henderson (LegendDairies)



35. Dr Hillary Bennett (Leading Safety, I attended the Forum's mental wellbeing by design workshop)
36. Janna Hocken (Lean Farm, Grasmere Dairy)
37. Margaret Simpson (PeopleMAD, Health and Safety Consultant)
38. Loshni Manikam (Thriving Farming Women)
39. Marie Roberts (Kanuka Wellbeing and Leadership)
40. Richard Kyte (Thriving Southland)
41. Mel Poulton (Farmer, NZ Special Agricultural Trade Envoy)
42. Linda Coppersmith (New Zealand Young Farmers, CEO)
43. Jessica Fraser (Aquila Sustainable Farming, GM)
44. LTCOL Morrie Parsons (NZ Army)
45. Dave Gawn (Pike River Mine Recovery Agency, CEO)
46. Steve Carden (Pamu, CEO)
47. Charlotte Glass (AgriMagic, Director and Founder)



Appendix 2 – Research Insights Detail

I completed a review of the following research, using the Health Belief Model to unpack the insights and identify the root cause of behaviour and attitudes towards health and safety management on farm.

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2. Irwin, J. Mihulkova, S. Berkeley, I. Tone 'No-one else wears one': Exploring farmer attitudes towards All-Terrain Vehicle helmets using the COM-B model 2021
3. Sorensen, J. A., Tinc, P. J., Weil, R., & Drouillard, D. (2017). Symbolic interactionism: A framework for understanding risk-taking behaviors in farm communities. *Journal of Agromedicine*, 22, 26-35.
4. Irwin, A Poots J, Investigation of UK Farmer Go/No-Go Decisions in Response to Tractor-Based Risk Scenarios, *Journal of Agromedicine* , 23:2, 154-165
5. Rose, D. C. Keating, C. Morris, C. Understanding how to Influence farmers' decision-making behaviour, a social science literature review, Agriculture and Horticulture Development Board 2018
6. Irwin, A. Poots, J. The human factor in agriculture: An interview study to identify farmers' non-technical skills *Safety Science* 74 (2015) 114-121
7. Irwin, A. Caruso, L. & Tone, I (2019) Thinking ahead of the tractor: Driver Safety and Situation Awareness, *Journal of Agromedicine*, 24:3, 288-297

The key insights from the research was:

Perceived Susceptibility (perceived risk for sustaining the injury)
Over confidence in capability and perceived depth of experience.
Current practices perceived as "safe and efficient" and as safe as they can be, even if they don't comply with recognised safety or good practice standards.
Complacency – it won't happen to me (risk of injury perceived as low)
Acceptance of some risk - some accidents are seen as inevitable (some people are just accident prone; this work is dangerous; I can't avoid doing this task).
Familiarity leads to an underestimation of the risk (risk habituation).
Farmers don't think what they are doing is dangerous (it hasn't killed them yet).
Farmers feel infallible and invincible – previous near misses may result in confidence in ability to get out of trouble.
Perception that experience, care and attention reduces risk – we're super human and won't make mistakes.
'Illusion of control': the individual believes they can ensure a positive outcome through their own experience and may therefore take more risks.
Risk is seen as necessary for the occupation – risk acceptance.
Perception farmers are doing the best they can in the environment in which they operate.
Perception risky behaviours are "worth the risk" (i.e. risk factors are perceived as out of control and/or the value of the risky behaviour is seen to outweigh the risks).
Exposure to the risk is constant and this leads to acceptance or risk normalisation.



<p>Social norms (Social demographic variables) Social norms are generally defined as a set of unwritten rules guiding behaviour within a group or society which can influence actions and impact well-being.</p>
Acceptance of the risk – seen as part of farming or outside of farmers' control.
Perception that everyone is aware of the hazards and responsible for themselves; this is "common sense".
Autonomy and personal experience are highly valued in the sector; this results in strong resistance to anything which appears to undermine these values (including health and safety).
Suspicion of government departments results in scepticism about advice coming from agencies or government with a vested interest.
With a high number of "own boss" operations there is no one else to enforce safety behaviours.
Negative social influences (e.g. risky behaviours modelled by parents and peers).
Exposure to negative role models and poor job training results in a belief that the current approach is the correct way to do things.
Prevailing attitudes toward the way things are currently done (the production process or work environment) result in a perception that this is "how it has to be" and an inability to identify alternatives.
Early introduction to risk means farming children learn risk behaviours and see these as normal.
Industry wide focus on PPE as the primary line of defence in safety comes at the expense of maintaining a focus on safety leadership, awareness, conversations, altered work flow practices etc.
Teams defer to their leaders. If their leaders do not model the right behaviour (e.g. wear a seat belt) and the social norm has been not to in the past – despite the provision of them – they are very unlikely to wear one.
Fear of challenging authority figures or identifying issues.

<p>Knowledge about the causes of injury and beliefs about the use of strategies to improve health and safety and reduce injury</p>
Farmers construct themselves as being highly practical and require evidence of the ways that changes to their practice will improve safety, production, or income.
Farmers think they can control the risks (do dangerous stuff as safely as they can). There is a lack of focus on strategies to improve outcomes and limited knowledge of higher level controls (which remove the human factor).
Poor understanding of the hazards and risks associated with the work and how they're managed.

<p>Self-efficacy (perceived ability to carry out recommended action)</p>
Attitudes towards the ability of individuals to control their own personal safety: "some people are just accident prone".
Difficulty understanding what is required on farm to meet good practice/legal requirements and a conflict with "lived" experiences.
Confusion in messages and information being received, about what they must/should do to 'comply' with rules and regulations.
Perception: I don't have the skills and knowledge to deal with this.



Appendix 3 - Alignment between Good Work Design Requirements and FLINTS

The following table explores the alignment between the Forum's Good Work Design Requirements and FLINTS. My recommendation is that the sector designs training which helps farmers build the necessary non-technical skills and then supports them while they develop these skills to become competent.

Good Work Design Requirements – Business Leaders Health and Safety Forum	FLINTS Non- technical skills (in bold) Behaviour markers (skills) (in italics) Observable behaviours (in plain text)
<p>Realistic timeframes and work targets. Acceptable workload; Well paced work; Adequately staffed; Flexible work schedules; adequate rest and recovery times; good work life balance; regular, social working hours</p>	<p>Decision Making: <i>adapting to circumstances</i></p> <ul style="list-style-type: none"> Identifies alternative jobs to complete when original work is no longer an option. <p>Task Management: <i>Preparing</i></p> <ul style="list-style-type: none"> Sets out times by which jobs or specific work need to be done (e.g. high field reseeded by 1st March, calves registered by 5pm). Uses maps and weather forecasts to plan work and vehicle/equipment selection
<p>Good match between skills and work requirements; Good use of current competencies</p>	<p>Leadership: <i>Directing/guiding task behaviours</i></p> <ul style="list-style-type: none"> Assigns work tasks with consideration for worker capabilities, experience and training (e.g. promotes work shadowing and training opportunities where possible) Makes sure that work activities can be completed safely (e.g. makes sure appropriate equipment and help is available)
<p>Clear goals and expectations; clear distinct roles</p>	<p>Teamwork and Communication: <i>coordinating with others</i></p> <ul style="list-style-type: none"> Holds an informal chat before starting work in order to agree on the actions of the day. Informs everyone when there is a change to a plan that was initially agreed. <p>Leadership: <i>Directing/guiding task behaviours</i></p> <ul style="list-style-type: none"> Makes daily plans and task lists easily accessible to workers (e.g. to-do lists,



	notice boards of the daily activities/tasks).
Appropriate involvement in decisions	<p>Decision Making: <i>Identifying & Selecting Options:</i></p> <ul style="list-style-type: none"> • Takes into consideration other workers' opinions/suggestions before starting work (i.e. group based decision making). <p>Teamwork and Communication: <i>coordinating with others</i></p> <ul style="list-style-type: none"> • Is open to the input of others while planning or doing work (e.g. adopting different approach based on team suggestions). • Checks in with others when working separately in order to maintain a shared understanding of how tasks are progressing.
Positive and respectful, non-threatening and supportive working relations; Psychological safety	<p>Decision Making: <i>adapting to circumstances</i></p> <ul style="list-style-type: none"> • Stays calm and composed when circumstances prevent work from being completed according to the original plan. <p>Leadership: <i>Leading by Example</i></p> <ul style="list-style-type: none"> • Openly takes accountability for personal errors or inappropriate behaviour.
Supportive leaders and colleagues	<p>Team work & communication: <i>Managing Handover</i></p> <ul style="list-style-type: none"> • Offers support to less experienced workers if they appear to be struggling. • Makes themselves available to team members (e.g. is easily contactable and responsive). <p>Leadership: <i>monitoring staff</i></p> <ul style="list-style-type: none"> • Keeps an open channel of communication, allowing workers to get in contact and express concerns when needed.
Clear and transparent communication	<p>Team work & communication: <i>Managing Handover</i></p> <ul style="list-style-type: none"> • Communicates important information effectively and efficiently (e.g. discusses status of equipment and task).



	<ul style="list-style-type: none"> • Adapts the use of language based on the incoming worker's experience and understanding. • Confirms the incoming worker has understood the given information and knows what is expected of them. • Is able to leave the work area following the handover without negative impact on the completion of work. <p>Team work & communication: <i>Exchanging Information</i></p> <ul style="list-style-type: none"> • Adapts their language based on the expertise of the workers or visitors receiving the message (e.g. uses accessible language). • Confirms that important information is understood by the person receiving the message (e.g. asks them to repeat the important information). <p>Leadership: <i>Directing/guiding task behaviours</i></p> <ul style="list-style-type: none"> • Provides specific and clear instructions to farm workers and makes sure that these are understood. <p>Task Management: <i>Preparing</i></p> <ul style="list-style-type: none"> • Provides advice and information to contractors prior to them starting work.
Meaningful appreciation and recognition	<p>Leadership: <i>Leading by example</i></p> <ul style="list-style-type: none"> • Rewards or recognises individual's safety performance (e.g. acknowledges when someone reports a safety issue or near miss).
Appropriate monitoring of work	<p>Leadership: <i>Monitoring staff</i></p> <ul style="list-style-type: none"> • Checks in with workers regarding their progress, wellbeing and location (either on location or through communication devices). • Monitors and keeps a record of staff working hours in order to prevent self/organisation motivating overworking. • Pays attention to signs of poor staff wellbeing (e.g. mental health), stress, or fatigue (e.g. smoking, diet).



	<p>Leadership: <i>Leading by example</i></p> <ul style="list-style-type: none"> • Responds to rule breaking as an opportunity to teach, rather than punish. <p>Task Management: <i>Providing and maintaining standards</i></p> <ul style="list-style-type: none"> • Carries out and organises regular equipment and workplace checks (e.g. organises routine inspection of trailers and equipment). • Sets out and follows a regular equipment maintenance plan. • Makes use of checklists/ check sheets while inspecting equipment. • Goes beyond basic checks (i.e. looks behind wheels for damage, counts wheel nuts, looks at the tread). • Uses a system of recording equipment checks and maintenance history. <p>Task Management: <i>Preparing</i></p> <ul style="list-style-type: none"> • Walks the land before planned work, checking for possible safety hazards (e.g. open gates, powerlines, ditches). • Carries out written or visual risk assessment before starting work.
<p>Adequate, sufficient equipment</p>	<p>Task Management: <i>Organising Resources/infrastructure</i></p> <ul style="list-style-type: none"> • Identifies suitable work areas to complete work safely and efficiently (e.g. (un) loading trailer in a safe location). • Plans and follows a safe traffic management plan for the farm (e.g. one-way system, minimises reversing, segregation of equipment/transport and pedestrians). • Keeps hazardous materials (e.g. chemicals) locked away. • Makes sure that appropriate equipment is readily available where needed (e.g. livestock handling equipment). <p>Task Management: <i>Preparing</i></p> <ul style="list-style-type: none"> • Ensures that appropriate PPE and equipment are available and in working condition.



Appendix 4 – Characteristics of the Four Quadrants

The interviews and conversations I completed during this project identified the following characteristics of farmers in each of the four quadrants.

	Quadrant 1 Don't Get It Don't Do It	Quadrant 2 Don't Get It Do It	Quadrant 3 Get It Can't Do It	Quadrant 4 Get It Do It
Involvement of people in decision making	Hold power. Team are impotent to affect change in work design. Suggestions received badly as a threat or attempt to criticise.	Hold power. Unlikely to involve team in decision making. Team consultation lacks authenticity or effectiveness and fails to change work design.	Share power. Space for people to open up and discuss work can result in change in work design. Regular discovery conversations.	Empower. Team fully empowered to identify opportunities and contribute solutions. Team have agency to change work design.
Work process design	We do things my way. Work processes are in my head.	Procedures in place for compliance tasks; many reflect work as imagined rather than work as done.	Informal ad hoc processes result in lack of standardisation and are a limiting factor for good work and productive outcomes.	Standardised processes result in consistent, high quality outcomes, facilitate training and support skill development.
Purpose Vision Values	Individual focus. No purpose, vision or values articulated. Team have no understanding of how the contribute to the big picture.	Purpose, vision and values may be articulated but lack authenticity and/or meaning.	Values unarticulated but integrated into behaviour through "living" the values to create good culture.	Purpose, vision and values clearly articulated and alive with aligned behaviours. Team understand how they contribute to the big picture.
Catalyst for Change	Consequences: Will change when it is too painful not to. Reactionary approach resists and slows progress.	Fear & Compliance. Responds to carrots and sticks and acts from fear. Reactive: changes if there	Changes when resources allow.	Opportunity: Learning culture continuously looking for opportunity to improve and innovate in alignment with



		is a monetary impact or to meet legal obligations.		purpose, vision and values.
Approach to building capability	Fixed Mindset. One directional instructions focused on reproducing what they know (how it's been done before).	Education only focused on "box ticking" to manage risk.	Support learning and development but lack skill, tools, method or resources to make it effective.	Growth Mindset. Define what capabilities the business or person desires. Plan and resource skill development including training, feedback, supervision, coaching, mentoring. People are continually learning at their own pace in line with their goals.
Investment in good work design	Underinvestment in new infrastructure, plant and equipment. Changes made only when absolutely necessary.	Considers compliance requirements. Need to transition to different ways of doing things seen as a risk to be managed.	Consults with the team and considers their views; however resource limitations constrain outcomes.	Committed to identifying, and investing in plant, equipment and infrastructure required for the future to attract and retain talented people and support good work design.
Information sharing, communication and authority	Provides information only when asked. Communication involves one-way lectures. People at the top have all the authority and feel totally responsible for outcomes.	Provides information deemed required. Communication processes are two-way but lack of trust results in ineffective sharing and communication. All information pushed up to leader for	Trusting relationships and space for people to open up and discuss work creates safe environment for information sharing and communication. Lack of formal processes can limit effectiveness.	Share the right information, at the right time and in the right way to empower and engage people. Communication processes are two-way resulting in meaningful engagement



		decision making.		and effective outcomes. People clear on their responsibilities and empowered to make decisions as per their responsibilities. Team ownership of responsibility and results.
Approach to diversity of thought	Talk to others like them. Reject others for being different.	Talk to experts.	Accept and respect all team members – openness and appreciation for all views.	Diverse thinking is highly valued. Accept and respect all team members – openness and appreciation for all views. New ideas, approaches and perspectives are encouraged or even expected.
Locus of control	External locus of control			Internal locus of control (including safety control)
Production or People focus?	Production focus. People are a necessary evil.	Production focus. People are a resource.	People focus. Genuine care for people.	People focus. People are highly valued. The physical, emotional and social needs of people are at the core of decision making.



End notes

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- Safe Work Australia (2021) <https://www.safeworkaustralia.gov.au/resources-and-publications/statistical-reports/key-work-health-and-safety-statistics-australia-2021>
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- ¹⁷ For a more detailed summary of what the research tells us, see Appendix 2. .
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- ³¹ For more information see: <https://forum.org.nz/resources/protecting-mental-wellbeing/>
- ³² Safe Work Australia Principles of Good Work Design, a work health and safety handbook
- ³³ Safe Work Australia Principles of Good Work Design, a work health and safety handbook
- ³⁴ Great South Primary Sector People and Team Leadership Programme 2021. 22 businesses participated and were able to use the DairyNZ 360 self-assessment even though they weren't all dairy farmers and represented a cross sector sample of farmers. Limitations with this data: Allowing participants to self-select into the programme may be a limitation. It could be argued that these participants were already acutely more interested in people, due to their willingness to participate. Alternatively, it could be argued that these participants were aware of the gaps in their current practice, which encouraged them to participate; either way this may limit the data. The 360 is also a self-assessment which will mean individual bias will affect results.
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- ⁵⁰ *ibid*
- ⁵¹ *ibid*
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- ⁵⁷ Primary Industries Health and Safety Partnership (2015) *Exploring the barriers and facilitators to adoption of improved work practices for safety in the primary industries* July 2015 RIRDC Publication No. 15/06



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- ⁶⁵ The hierarchy of controls is set out in Regulation 6 of the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016
- ⁶⁶ "Making sure people fail safely, if they fail" is a key aim of Mike Cosman. Mike was a member of the Independent Taskforce on Workplace Health and Safety and is a distinguished and knowledgeable health and safety practitioner who generously shared his experiences with me during this project. <http://cosmanparkes.co.nz/>
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- ⁷⁵ For a great example of a visual format for communication see Grasmere Dairies' health and safety video: https://youtu.be/iB_0SUQz6pU
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