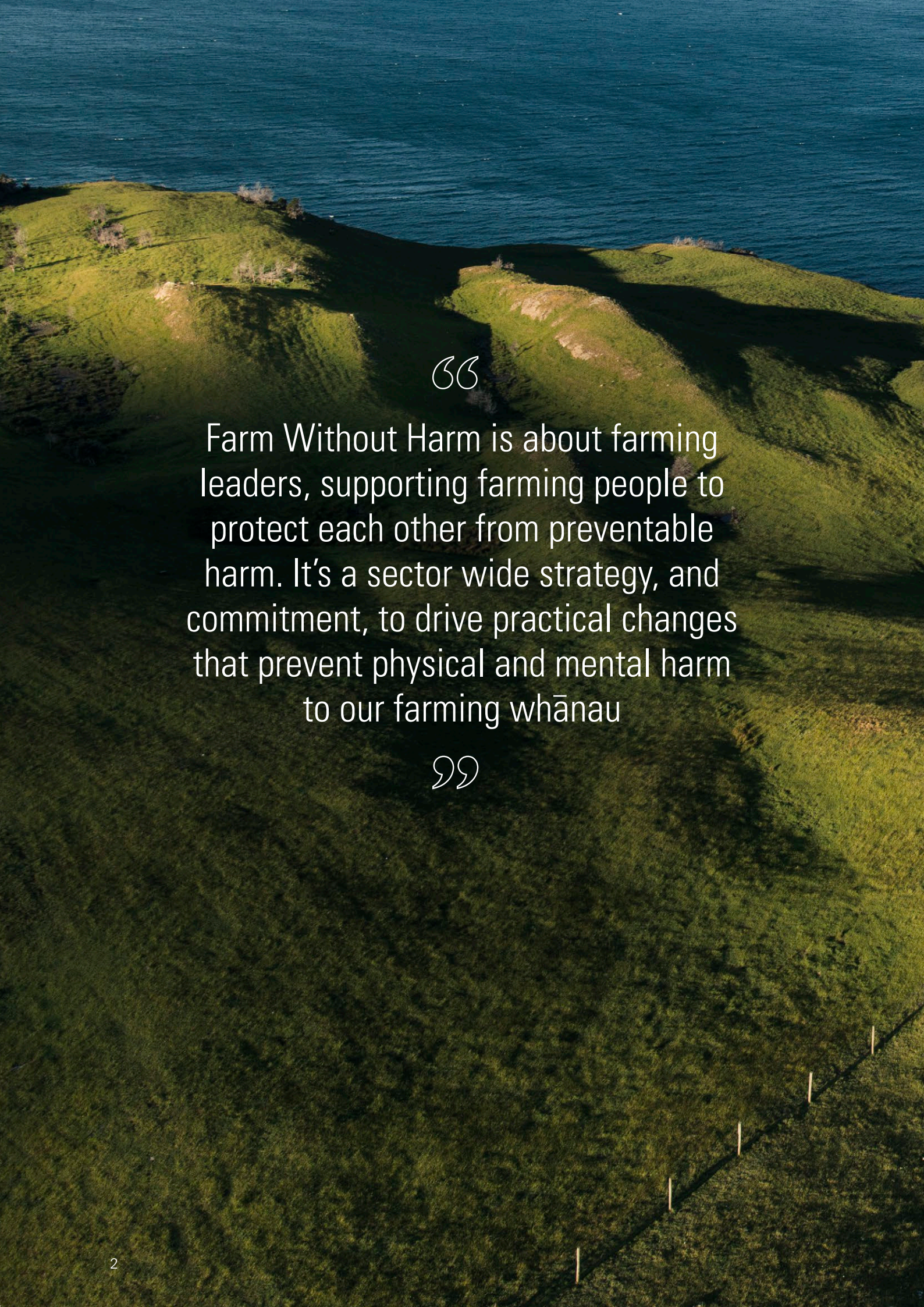
safer farms

Farm without harm

Every day, farming people protect each other from preventable harm.

October 2021



“Farm Without Harm is about farming leaders, supporting farming people to protect each other from preventable harm. It’s a sector wide strategy, and commitment, to drive practical changes that prevent physical and mental harm to our farming whānau”

Mihi

It is our responsibility as leaders, friends and whanau to go beyond the statistics of harm. To sit with the pain, when we lose someone.

Only from a place of grief, can we honestly start to tell the story about harm in Aotearoa New Zealand's food and fibre sector.

While our experiences of harm might differ – from long-term pain to unexpected tragedy, physical injury or mental health – we all know this story.

As farming Kiwis, it's in our DNA to protect one another. And so, in the spirit of rewriting our story of harm for good, we offer this strategy to the sector.

It's our line in the sand. As a group of individuals and organisations committed to protecting our people from preventable harm, we accept the responsibility to lead the way.

It is our intent to develop a new approach to wellbeing on our farms. Developing a deeper understanding of harm in all its forms, redesigning preventable harm out of our farming systems and leading a genuine culture of care among us – one that goes beyond high-vis and helmets.

We must do this together. No more fractured policy-making or shifting the responsibility of safety onto individuals. We will build on the good work already being done and lead system-wide, collective action across our farms, rural communities, supply chains and government.

Rewriting our story of harm will not be easy or quick. But we owe it to those we've lost, and those who will farm after us, to work towards a future where every day, farming Kiwis protect each other from preventable harm.

Come and join us.

Lindy Nelson, Chair, SaferFarms

Farm Without Harm is a collective primary sector strategy, led by Safer Farms and a steering group including:

- Karen Williams, *National Vice President, Federated Farmers*
- Dr Angela Mansell, *Director of Engagement and Implementation, WorkSafe*
- Al McCone, *Agricultural Sector Engagement Lead, WorkSafe*
- Dr Rebbecca Lilley, *Injury Prevention Research Unit, University of Otago*
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- Virginia Burton-Konia, *Manager Workplace Safety, ACC*
- Roger Weldon, *GM Health and Safety, Fonterra Farmsource*
- Jack Raharuhi, *Operations Manager, PAMU*
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- Justine Kidd, *Managing Director, Kitahi*
- Colin Glass, *Director, Dairy NZ*

Contents

Foreword

The Agriculture Sector is one of the most important primary industries contributing to New Zealand's economy, yet is one of the most dangerous places for New Zealanders' to work.

Unfortunately, this is not a new story. For many decades the agricultural and farming sector across New Zealand has suffered from high harm statistics. These statistics have led to agriculture being named as one of New Zealand's priority sectors for health and safety intervention under WorkSafe and ACC's New Zealand's Harm Reduction Action Plan.

Despite past and present efforts and good intentions from multiple parties from within the agriculture industry, and despite participation from across its wider set of government and private stakeholders, the harm statistics remain stubbornly high. This means that people's health, wellbeing, and lives are at stake every day.

The victims represented by these statistics are the people that live and work within one of the most important industries to New Zealand's economy and national identity.

This strategy and action plan 'FARM WITHOUT HARM' aims to allow the people living and working on farms to flourish on safe, healthy, sustainable and productive farms.

“The victims represented by these statistics are the people that live and work within one of the most important industries to New Zealand's economy and national identity.”

Executive summary

'Farm without harm' is a bold, system-wide strategy and action plan which has been developed by the agricultural sector, for the agricultural sector.

In 2021, SaferFarms, a non-profit group established by leaders from across the Agricultural sector commissioned this work in response to the concerning and persistent rates of harm experienced by those working on farms. SaferFarms did this because it was clear that on the current trajectory, minimal change would come – not to act would conflict with the culture of care inherent across the Agricultural industry.

Not acting means accepting the poor safety performance of the Agricultural sector and accepting the needless loss of life and long-term disability from injuries caused by vehicle incidents, handling stock and falls. Not taking action means accepting the significant health issues farmers are facing due to the nature of their work, accepting that many will fall ill from respiratory illness and cancers due to chemical exposures, accepting that many will suffer from poor mental health and wellbeing, accepting many will feel the impact of the physically demanding work on their bodies, experiencing injuries or disorders which impact their lives and their livelihood. Not acting is just not an option.

Farm Without Harm – this strategy and action plan - outlines a vision for a better future for people living and working on New Zealand farms. A safer, healthier, happier and more productive future. Our vision is that every day, farming people protect each other from harm. This plan is about farming leaders, supporting farming people to protect each other from preventable harm. It's a sector wide strategy, and commitment, to drive practical changes that prevent physical and mental harm to our farming whānau.

Harm on farms is a complex problem and not a problem those working on farm could solve alone. To achieve our vision, therefore, requires collective, coordinated, and sustained effort across the Agricultural system. It requires those working on farms to look after themselves and their people, supported by broader influencers including a supply chain, sector and government that puts people first in all decision making.

Through this process we have explored what good looks like and identified the 'ingredients for success' across the system that influences health, safety and wellbeing on New Zealand farms. We have also sought to understand the system challenges and potential barriers to successful creating change.

This has resulted in five core activity 'pillars':

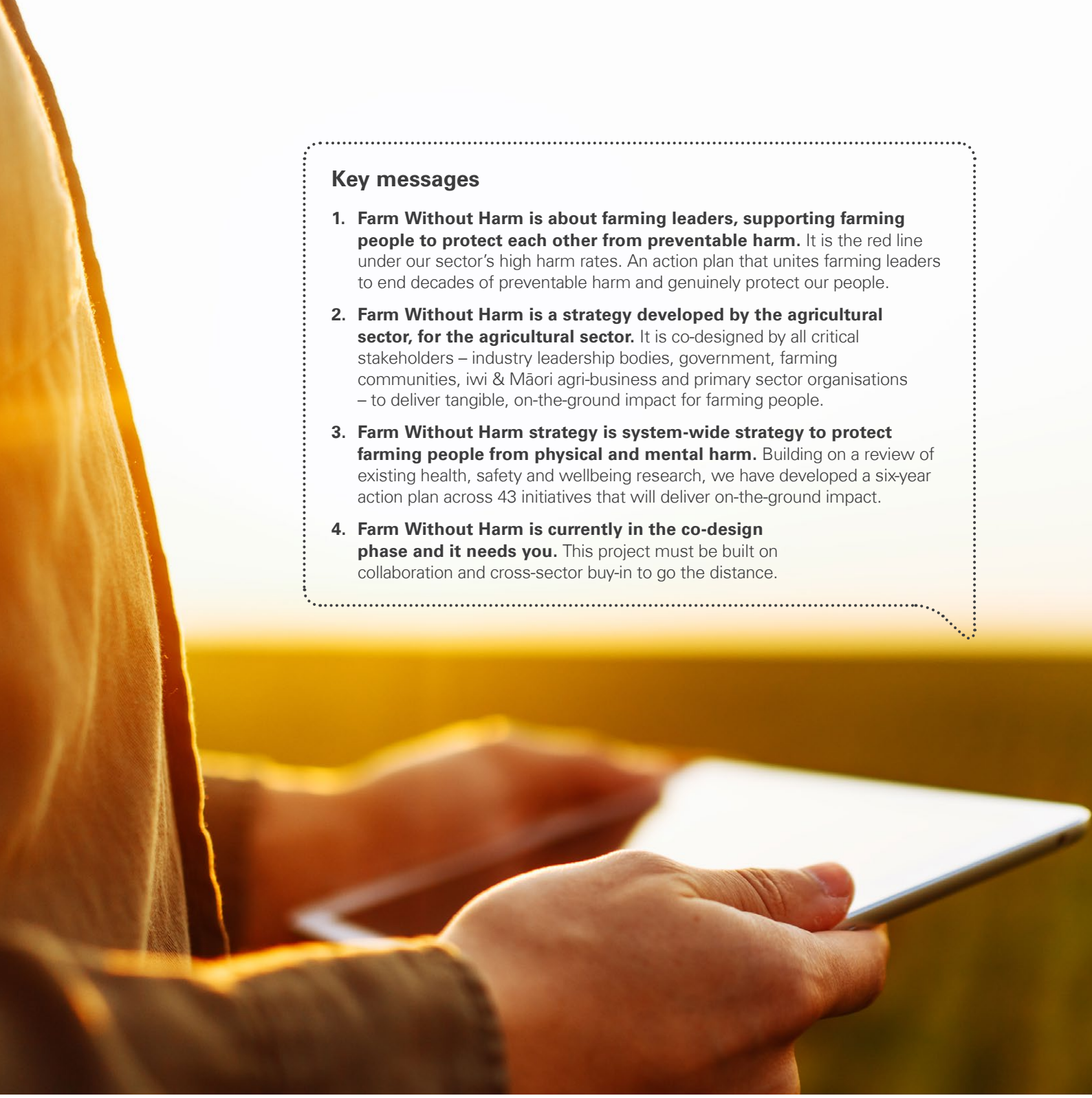
1. Winning hearts and minds of farmers, farm workers and on farm influencers
2. Building strong, visible, and aligned leadership from the board room to the farm
3. Growing capability and engagement on-farm
4. Focusing our efforts through insights and learning
5. Supporting technology adoption and investment in higher level controls

These activity pillars are the foundational work required to set up for success the New Zealand agricultural sector's health, safety and wellbeing system. These are the primary focus of the first three years of the action plan.

In addition to these core pillars, activity is also required to drive direct change across key harm areas in the sector. Each of these harm areas are complex in their own right and require action across a diverse set of stakeholders to achieve our vision. These harm areas are also interlinked, with diminished wellbeing shown to be a key risk factor for all other injuries.

The four key harm focus areas identified are:

- Psychosocial risks resulting in diminished wellbeing
- Harm experienced while working in and around vehicles and mobile plant
- Muscular stress and injury caused by livestock handling
- Harm caused by exposure to agricultural chemicals and airborne risks



Key messages

1. **Farm Without Harm is about farming leaders, supporting farming people to protect each other from preventable harm.** It is the red line under our sector's high harm rates. An action plan that unites farming leaders to end decades of preventable harm and genuinely protect our people.
2. **Farm Without Harm is a strategy developed by the agricultural sector, for the agricultural sector.** It is co-designed by all critical stakeholders – industry leadership bodies, government, farming communities, iwi & Māori agri-business and primary sector organisations – to deliver tangible, on-the-ground impact for farming people.
3. **Farm Without Harm strategy is system-wide strategy to protect farming people from physical and mental harm.** Building on a review of existing health, safety and wellbeing research, we have developed a six-year action plan across 43 initiatives that will deliver on-the-ground impact.
4. **Farm Without Harm is currently in the co-design phase and it needs you.** This project must be built on collaboration and cross-sector buy-in to go the distance.

The strategy and plan outlined in this document has been and will continue to be a collaboration between farmers, farm workers, farming communities, iwi, the agricultural supply chain, research communities and government working together to protect those on farm from harm. It will continue to develop as we try, learn, and discover how best to work together to achieve the vision.

Reading this document

The document is organised into various sections. In Part 1, we seek to establish the context in which the sector is operating by defining the current situation and problems we are seeking to address. We identify and characterize the nature and extent of harms that are occurring in the sector. We develop a framework for 'what good looks like' and test the agricultural sector's current performance against this. We also identify some of the key barriers that mean that making improvements in those areas has been difficult in the past. In Part 2, we articulate our plan for the future. We establish a vision for the future and some specific goals. We identify key areas (or pillars) of activity and indicate specific activities that should allow us to deliver lasting and effective change – the steps we must take to deliver a better future for the people of New Zealand's farms. To make them safer.

Part 1 - Context, challenges and opportunity

1.1 A case for change - Why we need to protect our people

Harm comes in many forms, but public attention and scrutiny is most often seen in response to severe and life altering forms of harm. The public will respond to and rally around catastrophic events, such as Pike River or Whakaari White Island, where many people lose their lives in a single tragic event. This level of public outcry does stimulate and drive sector, legislative and regulatory change.

By contrast, a comparable level and scale of harm goes relatively unnoticed when the injuries and deaths are a series of individual, unconnected incidents and single names over a year; and the attention is even less when livelihoods are impacted and lives are lost from occupational disease, which manifests slowly.

The following statistics highlight the nature and scale of harm which is impacting New Zealand's farming communities. We attempt to give voice to the individuals who suffer alone - the harrowing reality of much of the harm across the Agricultural sector.

“The following statistics highlight the nature and scale of harm which is impacting New Zealand's farming communities.”

Overall

Agriculture has one of the highest rates of workplace injury deaths of any industry, with 17 people working on farm losing their lives and an average of over 2850 injuries resulting in more than a week away from work every year. In addition, there is a broader harm burden across work-related ill-health which while difficult to measure, is significant.

Key Statistics[1]

(Between Jan 2008 and Dec 2020)

In New Zealand agricultural workplaces:

1. On average, over **17** people lose their lives every year - 11 deaths for every 100,000 workers
2. On average, over **2850** people sustaining serious injuries resulting in more than a week away from work every year – 17 serious injuries for every 1000 workers

17
Deaths

2850
Serious Injuries

Below we highlight key harm statistics across four harm areas:

- Harm experienced while working in and around vehicles and mobile plant
- Muscular stress and injury sustained while handling livestock
- Psychosocial risks resulting in diminished wellbeing
- Harm caused by exposure to agricultural chemicals and airborne risks

Between Jan 2008 and Dec 2020

The most common serious injuries resulting in more than a week away from work in Agriculture are:

1. Being hit by moving objects
2. Body Stressing
3. Falls, trips and slips
4. Vehicle incidents

While our tendency is to separate different types of harm, we need to acknowledge that health, safety, and wellbeing are often interlinked. We know that **24%** of on-farm injures can be directly attributed to diminished wellbeing – we get hurt when we are tired, overworked and under pressure.

It is also important to acknowledge this harm has on whānau – workplace injury, illness and death all impact the lives and livelihoods of farming families, both emotionally and financially, in some cases affecting the ability for farms to sustainably operate.

[1] *All statistics provided by WorkSafe NZ unless otherwise stated*

Harm experienced while working in and around vehicles and mobile plant

Most injury fatalities in agriculture are related to vehicle incidents and working in and around vehicles is one of the most common mechanisms of sustaining serious injuries resulting in more than a week away from work.

(Between Jan 2008 and Dec 2020)

In New Zealand agricultural workplaces:

1. On average, **11** people lose their lives every year from injuries sustained while working in and around vehicles
2. On average, there are **414** serious injuries sustained while working in and around vehicles resulting in more than a week away from work every year
3. The highest percentage of vehicle related fatalities occur in those aged 60 or older **(40%)**. Over half of these deaths occur in those aged 55 years of older **(58%)**.

Vehicle type	**Fatalities** (2008-2020)
4-wheel motor bikes (quads)	52
Tractors	45
Other (incl. utes, sxs, trucks etc.)	48
Total	145

Muscular stress and injury sustained while handling livestock

Specific figures relating to livestock handling are unavailable, however many of the most common injuries resulting in more than a week away from work are sustained while handling livestock

Muscular strain injuries more broadly are also very common.

Injuries due to muscular strain were almost **40%** of all WorkSafe recorded injuries resulting in more than a week away from work between July 2019 and June 2020.

WorkSafe also estimates that musculoskeletal harm accounts for **27%** of annual work-related disability-adjusted life years (DALYs) lost across all sectors.

Between Jan 2011 and Dec 2020

Three of the four most common injuries in Agriculture relate to handling livestock

1. Being hit by moving objects, often livestock
2. Falls, trips and slips, often whilst handling livestock
3. Body stressing, often whilst handling livestock

Psychosocial risks resulting in diminished wellbeing

Wellbeing has a significant impact on farm injury statistics with 2019 research by Farmstrong reporting **24%** of injured farmers attributing diminished wellbeing as the major contributor to their injuries accounting for **30%** of ACC annual farmer injury costs[2].

Wellbeing Challenges for Men	**Wellbeing Challenges for Women**
My workload/ fitting everything in (23%)	Getting more/better quality sleep (39%)
Challenges with important relationships— including staff (23%)	Getting more exercise (31%)
Lack of sleep or poor-quality sleep (22%)	More time off the farm (28%)

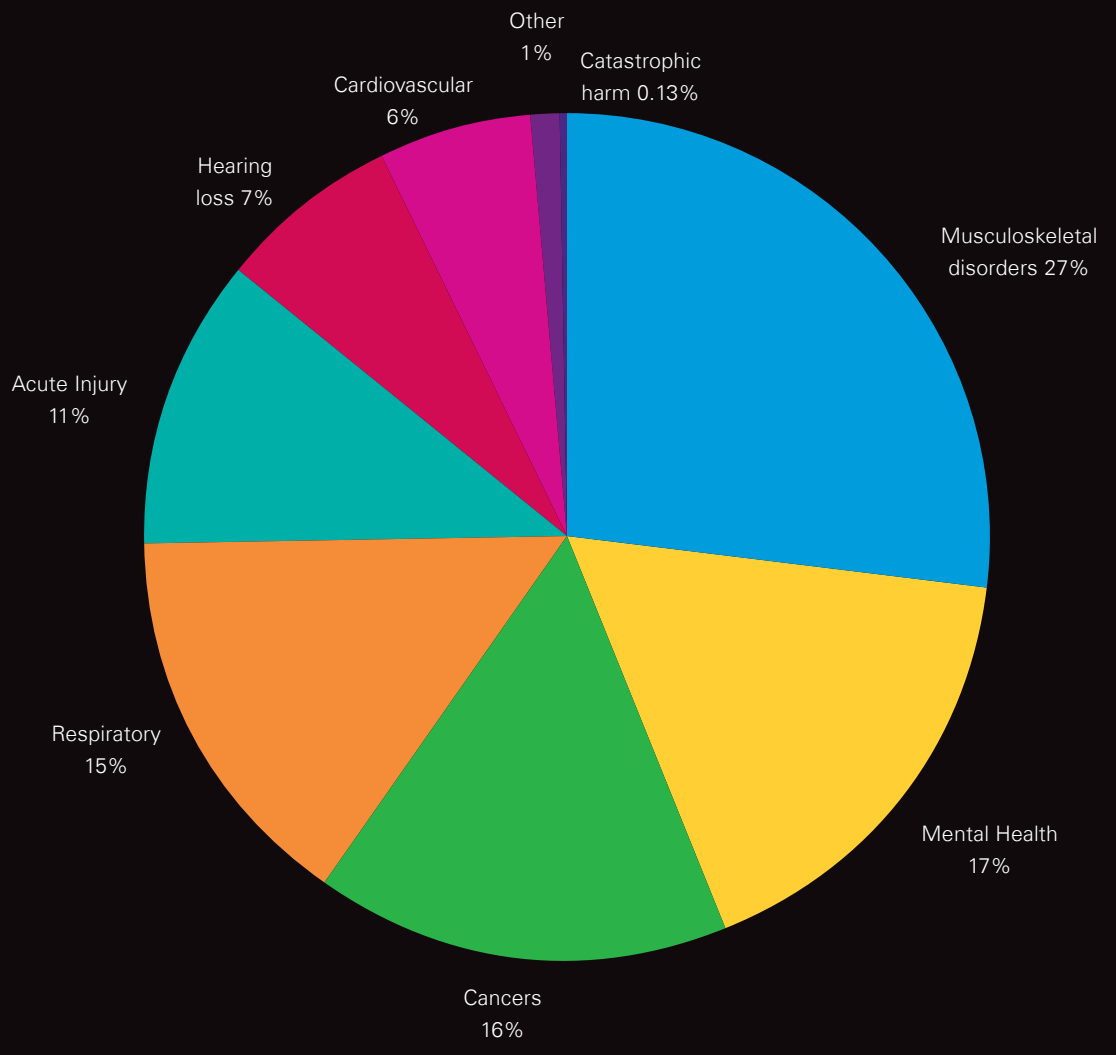
[2]*Farmstrong background paper for ACC on the link between wellbeing and injury – March 2020*

Harm caused by exposure to agricultural chemicals and airborne risks

Many chemicals and fuels found on farm have the potential to cause harm to humans and animals. These chemicals are associated with acute poisoning, and a myriad of chronic health effects, as listed below:

Exposures	Medical manifestations
Pesticides and fertilizers	Neurological disorders e.g. Parkinson's, Alzheimer's Cancers e.g. Non-Hodgkin Lymphoma, Leukemia, Cancers of the prostate, pancreas, lung, brain and ovaries.

There are limited studies on the health effects of pesticides in New Zealand, but those done to date point towards a sizable problem. This aligns to broader studies on the work-related health burden in New Zealand, as shown in the pie chart below. WorkSafe estimates across all sectors in New Zealand, a worker is 15 times more likely to die from a work-related disease than from a workplace accident.



1.2 A good system - Ingredients for success:

Individual farming business do not operate in isolation from the influence of broader structural, conduct and performance aspects of the agricultural system. The system is complex and dynamic so decisions made at the boardroom of interfacing organisations or in a parliamentary cabinet can directly influence the actions, decisions and behaviours of farming business and workers.

In this work, we have adopted and adapted a framework which was first published in the findings from the independent taskforce review of workplace health and safety[3]. This adapted framework can be used by the sector on a continuing basis to better understand the Agricultural health and safety system performance. We have used it to diagnose strengths and weaknesses in the New Zealand agricultural sector with respect to health, safety and wellbeing. We have also used it to underpin the structure of the strategy and action plan going forward.

It is our view that there are 13 elements that need to be in place for high performing health, safety and wellbeing outcomes to be delivered on New Zealand farms. They include:

> “A high performing New Zealand farming sector will support workers to be highly engaged in their health, safety and wellbeing”

[3] *Independent Taskforce on Workplace Health and Safety. The report of the Independent Taskforce of Workplace Health and Safety. 2013.*

On farm influencing factors
(how Kiwis live, work and lead on the farm)

Worker engagement, participation and representation.

Looks like: Farming people feel invested in their safety – they actively suggest practical solutions because on-farm leaders model a genuine commitment to safe work, instead of palming it off as 'common-sense'. Currently, only 31% of farming people report being highly engaged in the working safety – the lowest in Worksafe's high-risk sectors.

Good risk awareness and knowledge

Looks like: Safety moves on from box-ticking. Farming people actively identify and control risks before they happen, because they work in organisations that prioritise safety over productivity.

Good risk control

Looks like: We actively design harm out of our farming systems and products, instead of relying on lower order controls like education and PPE.

Quality senior leadership

Looks like: We support farming leaders to develop the soft skills needed to move past the "she'll be right" attitude and make health, safety and wellbeing a priority.

Immediate influencing factors
(off-farm influences that shape on-farm behaviour)

Regulatory clarity and effectiveness

Looks like: Regulation motivates stakeholders across the supply chain to improve, not just comply.

Supply chain ownership and participation

Looks like: Equipment suppliers acknowledge the risks inherent in their products and services, and we all work collaboratively to design these out or minimise them.

High quality data and insights, accessible and informing action

Looks like: Shared data platforms that ensure all stakeholders understand the leading indicators of harm. When things go wrong, we are open and honest enough with each other to share why.

Active community leadership

Looks like: We support community groups and on-farm influencers to continue their good work around normalising on-farm safety and wellbeing.

Sector-wide influencing factors:
(those wider factors that impact the farm indirectly)

Sufficient and capable agricultural labour supply

Looks like: We recognise how labour shortages add pressure to farming people and respond to this challenge through collaboration, advocacy, innovation and work re-design.

R&D, innovation and investment

Looks like: We are accelerating the use of technology that improves wellbeing on-farm – from low-tech options like shearing harnesses to high-tech infrastructure like self-milking cow sheds.

Consumers expecting safe and healthy work

Looks like: End-consumers are able to engage with and influence the health, safety and wellbeing of people in the supply chain. This is recognised as a value proposition for Brand New Zealand.

Both a national and sector-wide culture of risk awareness

Looks like: Sector culture change takes place in a wider national culture change. All New Zealanders develop a lower tolerance for risky, unsafe and unhealthy work.

Sufficient enabling health and safety & specialist workforce

Looks like: A sector that is well supported by health, safety and wellbeing experts, because we have overcome issues around the supply and accessibility of specialist advice.

In addition, five key underpinning principles have been outlined, which are important for guiding success at all layers.

1. Hierarchy of controls

Wherever possible, our work will focus on designing risk out of our farming system - developing 'higher order' controls that can significantly reduce (or eliminate) risk, instead of relying on individual people to make the right decisions.

2. Monitoring of performance & culture of learning

Through continuous evaluation and improvement, we intend to build a more mature system that learns from its failures.

3. Care and commitment

Our work is grounded in our responsibility as leaders to demonstrate care and a commitment to the protection and wellbeing of farming people. We recognise that our sector's success, starts with them.

4. Collaboration

To realise unprecedented improvements in the health, safety and wellbeing of farming people – we need to demonstrate an unprecedented level of collaborate across the sector.

5. Consistent investment and focus

Realising our vision will not be fast or easy. We must commit the time, effort and funding needed to maintain progress over the coming years.

Distinguishing between direct action and advocacy.

Considering the broad nature of the 13 elements of 'a good system', and that a system-wide approach is needed to see real change on-farm – we recognise two forms of action ahead:

- **Direct action.** Initiatives that the sector has the skills, resource and scope to deliver rapid change. These primarily sit in the 'on farm' and 'immediate influencers' rings of
- **Advocacy and influence.** Areas where we must engagement with and influence others to improve health, safety, and wellbeing in our sector. This activity sits in the 'wider influence' category of 'a good system' – it is broader than our direct control, but is required for system change.

The view of those involved in this work is that we will not make the change we seek by addressing elements of the system in isolation – we must seek to understand, develop, and activate activity across all levels of the broader eco-system. This framework helps us to do that.

Each of these factors is explained below.

'On farm' influencing factors

The four factors below describe the elements that must be in place on-farms to have a high performing health and safety system. These are factors that those living, working, managing, and governing on the farm have direct control or influence over.

1. Worker engagement, participation, and representation

Strong worker engagement, participation and representation can lead to healthier and safer work as it increases mutual understanding and cooperation between management and workers. Workers are often, but not always, able to suggest practical and cost-effective solutions to managing risk and regardless need to be involved in implementing solutions and changing behaviour, which is likely more effective through their early and continuing engagement on the issues.

In focus groups with a range of representatives from across the sector we have heard that many working on-farms believe health and safety 'is just common sense' without due acknowledgement that basic levels of practical knowledge, experience and judgment differ across the sector. We have also heard through focus groups with representatives across the sector this is often the culture created by those in management positions (farm owners). Supporting this, a 2010 WorkSafe

[4] *WorkSafe New Zealand. Workforce segmentation and insights programme - Agriculture . 2020.*

report[4] revealed that 86% of Agricultural workers 'always have a say in decisions that affect their health and safety', which is well above the national average. However, only 31% are highly engaged when it comes to working safely, the lowest percentage of any of Worksafe's high risk sectors. Further, more than two-thirds of agricultural workers are unlikely to let health and safety requirements get in the way of 'getting the job done'.

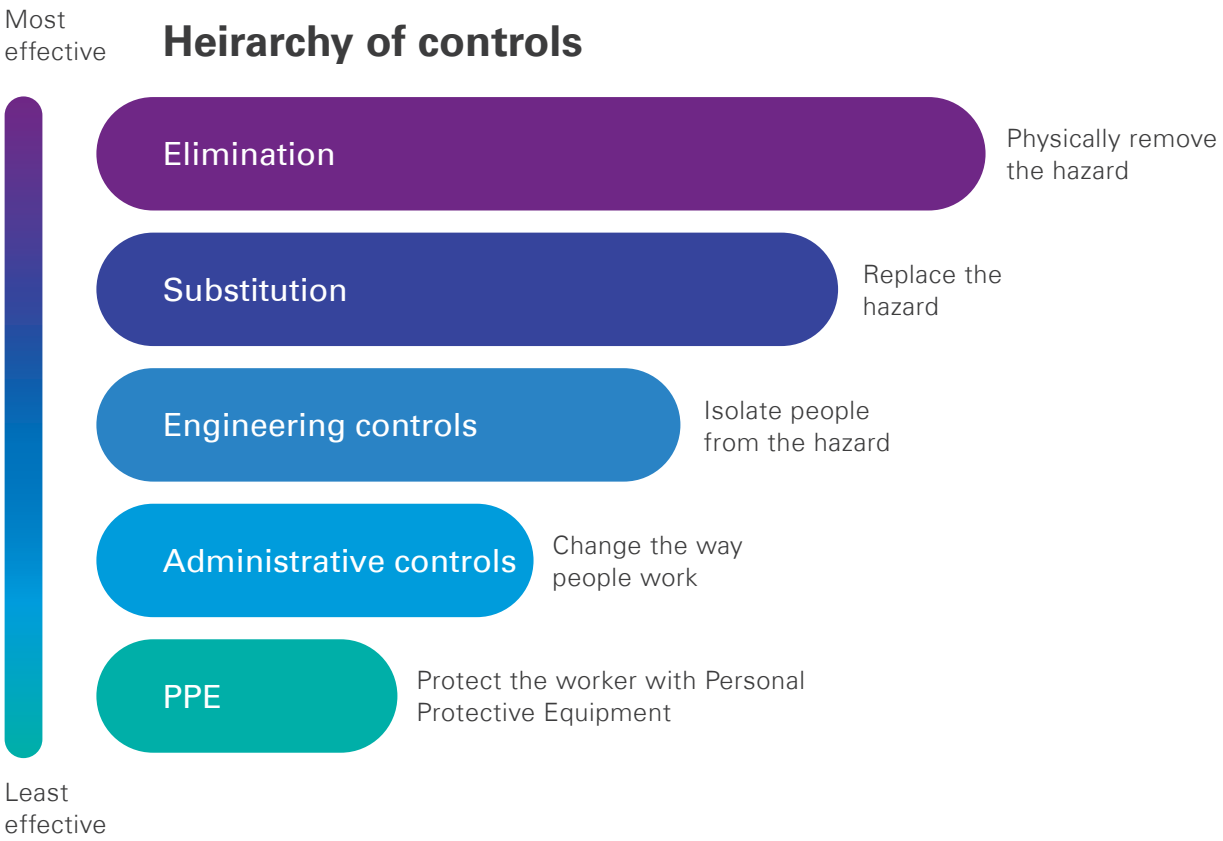
All those working on farm must be engaged in developing, implementing, and monitoring safety systems. This engagement must be supported by on-farm leadership showing genuine commitment to the health, safety, and wellbeing on themselves and those working on farm including employed farm workers and/or whānau undertaking farm duties.

A high performing New Zealand farming sector will support workers to be highly engaged in their health, safety and wellbeing.

2. Good risk awareness and knowledge

Risk awareness and knowledge on-farm is fundamental to ensure health, safety and wellbeing is not a compliance or 'tick-box' activity, but rather than risks are identified and managed prior to when they arise. If those working on farm can dynamically observe, assess and analyse the environment while working they can identify a hazard in the moment and make quick decisions to ensure their own and others safety.

In focus groups we have heard those working



A high performing New Zealand farming sector will seek to eliminate risk where possible rather than leave it up to individuals to behave well every time.

on farm generally have good risk awareness and knowledge, with the exception of unskilled labour/those entering the workforce, however many decisions are made prioritizing productivity over safety – in-part because 'I haven't had an accident before'. The absence of historic injury incidents potentially reinforces poor safety decision making.

Risks must be identified and understood by those working on and managing the farm. All on the farm must know how to dynamically assess and mitigate or eliminate risk.

A high performing New Zealand farming sector will develop a workforce that has the capability to manage risk well.

3. Good risk control

Good risk control, such as the preference of adoption and application of more effective controls, can significantly reduce risks or eliminate them completely. Better control of risk is a combination of changing how work is done and the context within which work is done. This reduces the reliance on individual people to make the right decisions and undertake the right actions every time. The 'hierarchy of controls' framework is set out in the Health and Safety at Work Act (HSWA) 2015 and is fundamental to good risk management and control.

In focus groups we have heard and observed an over-reliance on lower order, less effective controls such as a common perception that health and safety is just a compliance activity. For example, while handling chemicals, workplaces may promote the use of personal protective equipment such as gloves and respirators, however higher-level controls such as alternative chemicals, methods to spray chemicals with limited human contact or limiting exposure through job rotation were not considered.

This is further supported by messaging and activity of key influencers often focusing on these lower-order, less effective controls. However, evidence and good practice would suggest this leaves the sector more vulnerable to workplace harm than it needs to be.

Risks must be controlled and where possible controlled using more effective, higher-order controls which allow for inevitable human errors.

4. Leadership

On-farm leadership is fundamental to creating a culture that puts people first and protects those working on farm from preventable harm.

In focus we have heard and observed that many who are in leadership roles on-farm are there because they love farming and that people leadership is an additional responsibility many are not skilled in, and/or do not have an strong interest in. This coupled with a common 'she'll be right attitude' when it comes to health, safety and wellbeing can be troublesome for development of a positive workplace culture and a healthy and safe working environment.

Further, we have heard that farmers presently face a range of pressures and transformation change as a sector and as individual organisations, which compete for 'finite' leadership energy and attention. This potentially reduces the leadership focus and prioritisation on health, safety and wellbeing.

All people on-farm, but particularly those in leadership roles, must provide demonstratable leadership to create a culture of care and ensure protecting people comes first.

A high performing New Zealand farming sector will have high-performing leaders who make health, safety and wellbeing a priority, regardless of other pressures.

Immediate influencing factors

The four factors below describe what must be in place in the immediate influencing environment, directly interfacing with and interacting with those 'on farm' for the Agricultural sector to have a high performing health and safety system. These are factors that those interfacing with farms and farmers control, which influence on-farm behaviour.

5. Regulatory clarity and effectiveness

Regulators play an important role in driving process and behaviour change through supporting the sector to specify and understand its obligations and to deter non-compliance.

In focus groups we have heard that regulatory

presence across health, safety and wellbeing domains is not strong, particularly in relation to upstream duty holders (e.g. suppliers and manufacturers) and is not currently motivating participants to improve system performance. We heard that the response from some, but certainly not all, farmers is often that health and safety is viewed as a compliance requirement.

Regulators must be visible and effective, so all those with responsibilities under legislation know how to perform well and are motivated and enabled to do so. In addition, the regulator must hold upstream duty holders to account where they have created and/or are in the best position to manage risks and are not doing so.

A high performing New Zealand farming sector will be influenced by clear and effective regulators.

6. Supply chain ownership and participation

The supply chain can positively and negatively influence health, safety, and wellbeing on-farm through introducing or alleviating risks such as job demands or using their influence to drive practice improvements.

Through focus groups, interviews and desktop research we have identified many of these organisations have soft programmes which aim to support farmers to improve health, safety and wellbeing on-farm through communications or education, however they were disconnected, separate and not aligned. They were not measuring their effectiveness and potentially fragmenting effort that could deliver better outcomes if coordinated. There were limited examples of supply chain identifying and managing the risks they are introducing or utilizing their significant influence to drive change.

The supply chain and value chain must recognize their influence on the workplace

health, safety, and wellbeing, take responsibility for the risk they introduce or can affect and actively drive change.

A high performing New Zealand farming sector will be positively influenced across its supply chain for mutual benefit.

7. High quality data and insights, accessible and informing action

Clearly, some harms are more likely to occur in specific places or during specific activities and at specific times of year or day. Data and insights can enable the sector to identify these to focus preventive effort. A high performing sector would effectively monitor leading indicators of health and safety performance. This information would then be shared regularly across the system in order to improve the identification of health and safety risks across types of work and workplaces, and ultimately to minimize their occurrence or impact.

In focus groups we have heard and observed that there are varying levels of maturity across the agricultural sector in terms of health, safety and wellbeing data collection and analysis. Further, there are few examples of the sector sharing data and insights to improve sector performance. It was raised that learnings from serious incidents are seldom shared in a timely manner, despite many being investigated by the regulator. There is no obvious and effective mechanism for pooling this information and sharing insights for the good of others.

We must have good and trusted data and information sources, and this must be shared across the sector, arming those with greater influence to change on-farm harm with the knowledge they need for change to be meaningful. This means sharing of data and insights on risks, causes of workplace injuries and illnesses, and effectiveness of interventions by the regulator, industry and researchers.

A high performing New Zealand farming sector will be data-driven and collaborative in its effort to improve.

8. Active community leadership

Local communities, peers and family can be key influencers for those working in agriculture, particularly given the significant overlap between workplace and home that characterises much of the farming lifestyle.

In focus groups we have heard that there are strong community networks, and a suite of active and functional regional leadership groups which are currently operating, and although many of these groups do not have an explicit health and safety focus, many lead conversations on wellbeing. We have also heard individuals interacting with those working on-farm regularly (such as accountants, suppliers, farm consultants, vets etc.) are pivotal influencers, and are key to supporting on-farm behavioral change.

We must maintain the strong community and local leadership and identify effective structures and influencers to normalise safe behaviour on farm

A high performing New Zealand farming sector will maintain its active local leadership and community engagement.

Sector-wide influencing factors

The five factors below describe what must be in place in the broader eco-system, for the Agricultural sector to have a high performing health and safety system. These are factors that are influenced by public policy or other forces across many domains, and which have a material impact on attitudes, behaviour and health and safety outcomes on-farm.

9. Sufficient and capable agricultural labour supply

Adequacy of competent labour supply can influence job demands on-farm, which can in turn impact wellbeing and a key safety risk - fatigue.

In focus groups we consistently heard that there is currently a shortage of skilled labour, driving pressure into the existing labour force to do more. The accessibility of skilled labour has been an on-going issue, however, it has been exacerbated by a limited supply of

[3]KPMG. Agri-business agenda 2021

migrant workforce with current Covid-19 border restrictions operating at the time of developing this plan. Labour availability has been identified by industry leaders as the 5th priority in the 2021 KPMG Agribusiness Agenda[5]. Those in our focus groups highlighted this was adding stress to those individual farmers and workers already under pressure, increasing workload for many owner/operators, and limiting the ability to take time off the farm. This all impacts on the wellbeing of those operating in the sector.

There needs to be sufficient labour supply to positively influence health, safety, and wellbeing on farm. 'Sufficient' may mean responding to current labour shortages or mitigating the need for labour through re-designing work/ investing in technology. Workers must be capable and have the right competencies to carry out work in a healthy and safe way.

A high performing New Zealand farming sector will have enough good people to operate safely.

10. Research and development, innovation, and technology investment.

Innovative practices and technology have the potential to improve health, safety and wellbeing. Examples of this span low-cost ergonomic improvements such as harnesses to support posture during shearing to high-tech infrastructure such as self-milking cow sheds.

In focus groups we have heard some farmer-designed innovations are difficult to bring to market and there are barriers to the higher cost infrastructure investment, particularly where technology is early stage and riskier.

There must be sufficient investment in research and development to support innovation, testing, scaling and barriers to market must be reduced.

A high performing New Zealand farming sector will foster investment in technology to reduce harm.

11. Consumers expecting safe and healthy work

Consumer expectations can drive rapid changes to production and supply chains. They carry considerable market power to change behaviour and process.

In focus groups we have heard, increasingly, consumers are showing preferences for goods that are environmentally friendly and made under safe and fair working conditions.

Consumers must continue to engage and use their buying power to influence organisations to prioritise the protection of people across their supply chains. Equally, the New Zealand agricultural sector will need to introduce more fully the safety of its people into its global value proposition and take a global leadership role in requiring other nations to do so.

A high performing New Zealand farming sector will ensure consumers (locally and internationally) value the safety of those that supply them.

12. Both a national and sector-wide culture of risk awareness

A national culture of risk awareness, where all New Zealanders are aware of potential risks, have a low tolerance for risky, unsafe and unhealthy work and are collectively committed to improved outcomes, can support and reinforce positive and proactive management of risk across the agricultural sector.

In focus groups with a range of representatives from across the sector that many in the agricultural sector are reasonably risk-aware but are risk-tolerant.

We must as a sector and as a nation be intolerant to harm. This means collectively understanding key health and safety issues and being committing to solving them - living a culture of care and being proactive in protecting our people.

A high performing New Zealand farming sector will be influenced by a national culture of care for all New Zealanders.

13. Sufficient enabling health and safety & specialist workforce

Those who hold deep knowledge of health and safety and/or harm prevention, and those monitoring and evaluating the progress of the sector provide invaluable knowledge and insight which can support behaviour change. Examples of this workforce include occupational health and safety experts, ergonomists, health and safety advisors, health and safety researchers and evaluators, behavioural change specialists and intervention designers.

In focus groups with a range of representatives from across the sector and through desktop research we have identified through this process that there may be a limited supply of capable specialists across several of these domains. Furthermore, due to the geographical distribution and size of farming operations in New Zealand, this limited supply may be inaccessible to many.

To effectively understand sector performance and develop and deploy interventions to manage health, safety, and wellbeing on farm we must be supported by sufficient and capable specialist workforce.

A high performing New Zealand farming sector will be supported by experts.

1.3 System challenges / barriers to change

Above, we have sought to describe the nature, level and extent of harm on farms today. We have described the features we would want to see in a high performing health and safety system, and indicated where there is current potential for improvement for the agricultural sector against that framework. The next section in establishing our context involves identifying what makes improvement difficult to achieve in this sector - the 'barriers to change' that this plan needs to be aware of and to design for, in order to deliver on our vision and drive down the level of harm in Agriculture.

Health, safety, and wellbeing performance in agriculture is not a new issue, and this is clearly not the first attempt to drive change. Despite good intentions and effort, the sector has shown little measurable improvement[9]. This means lives are lost and livelihoods continue to be impacted every day. There are big challenges to consider and overcome to keep those working on farm safe. They include:

1. Lack of alignment and coordination – across the sector and with government
2. Lack of buy-in to health and safety messaging
3. Limited uptake of evidence-based interventions and good monitoring and evaluation
4. Lack of sustained focus and investment
5. Farmer mistrust in work-related health data and lack of willingness to tackle the problem
6. Difficulty engaging on-farm due to geographical distribution and proportion of 'owner operators' across the sector
7. Market, adverse weather, and seasonal fluctuations and impact
8. Skilled labour shortage
9. Change overwhelm and leadership fatigue

Each is more fully described below.

We have identified these challenges through research, analysis, and discussion with stakeholders from across the sector. These are all difficult and systemic issues, and we take the view that prior efforts to improve the performance of the sector have not sufficiently considered or responded to these, which has restricted the impact of well-intentioned efforts.

Some of these challenges can be resolved with attention and effort, while others are out of our control as they are inherent to the work and workplace. Each of them has, however, been considered in the development of this strategy and action plan and must continue to be acknowledged over time as the activity indicated in the second part of this report progresses through design and delivery.

Through this process we have also identified and articulated challenges which are driven by the current situation – for example the impact of Covid-19 or the rapid pace of legislative change impacting the agricultural community. These are present challenges that must be considered in this strategy and action plan, but may not continue to be challenges over the long-term.

Challenges we can and must overcome –

Lack of alignment and coordination – across the sector and with government

We heard from stakeholders that there is ample good intention and existing activity focused on harm prevention on-farm, through the supply chain, led by government and across the wider eco-system. It is our view, however, that these efforts would be more impactful and effective if they were more aligned and coordinated. There is not currently an aligned vision or a single, coherent, and compelling plan - 'Farm without Harm' aims to fill this gap. Nor is there a clear implementation structure for coordinating these efforts, to the extent that could be achieved.

[9] *Lilley R, Maclennan B, Davie G, Horsburgh S, McNoe B, Driscoll T. Decade of variable progress: trends in fatal injury in workers in New Zealand from a national observational study. Occupational and Environmental Medicine. 2021;78:167-172. doi:10.1136/oemed-2020-106812*

Protecting our people should come first. This means:

- working together to develop evidence-based approaches to harm reduction
- sharing data, insights and good practice
- aligning on setting, influencing and enforcing industry standards – using supply chain and value chain influence
- having clear and consistent messaging, guidance and training

Lack of buy-in to health and safety messaging

Despite agriculture being arguably being one of the least safe sectors in New Zealand, there is very little focus nationally on on-farm harm. Farmers' health, safety and wellbeing is not on the 'national agenda' and receives very little public interest and therefore little public scrutiny. Public scrutiny has driven safety improvements in many other laggard industries. Organisations and individuals that have potential to influence health and safety of those working in agriculture are not always aware of their influence or engaged and active in driving change, and despite good intentions, competing demands means it also often features low on farmers' list of priorities.

Groups working in this space have yet to be able to meaningfully compete for a 'share of voice' on this issue, and there are limited examples of campaigns that have successfully highlighted the unacceptable record of harm and advocated for change in the public domain. A greater focus on farming in national occupational health and safety campaigns is warranted.

Current messaging is not landing with the audiences we need it to, and this is leading to a sense of satisfaction with the current state. That is a fundamental barrier to change. In addition, other agenda items such as environmental legislation changes are taking priority, with farmers feeling overwhelmed with public interest issues. We've heard through focus groups with representatives across the sector, that loading farmers with more information and requests for them to change is already taking its toll on wellbeing, and another major item stacked on top of an already extensive 'to-do' list isn't likely to land. However, the health, safety, and wellbeing of those working in Agriculture should be non-negotiable, so we must cut through and create buy-in.

Communications and engagement must be fit for purpose, tailored and directed at audiences across the whole system (not just farmers) to build momentum and drive change. For example, for the following audiences:

- *Farmers and farm workers* – we must use communications effectively, through multiple channels, to support change in knowledge, attitude, beliefs and ultimately behaviors. This may mean 're-branding' of health, safety and wellbeing and ensuring communication and engagement overcome barriers (such as learning challenges, location & challenges accessing information channels etc.)
- *Family, peers and community* – we must consider how we use communications effectively, through multiple channels, to enable direct influencers to encourage/ promote/ support/model a change in behavior
- *Wider influencers* – we must consider how we use communications and influence effectively to encourage alignment of intentions across system influencers and drives change that promotes of deters behavior.

Limited uptake of evidence-based interventions and good monitoring and evaluation

Activities undertaken with the intention to reduce harm in agriculture appear to infrequently consider research or theory and seldom undertake credible monitoring and evaluation. This has resulted in few examples of credibly effective interventions, despite many decades of effort and investment. Where there is good evidence of the efficacy of interventions in the Agricultural setting the uptake of these interventions can be poor – even undermined by various players in the sector.

Research and behavioral change theory is not well understood or considered across the sector, including by those designing and delivering harm prevention activity. Through this

process, we have discovered many examples of educational-only interventions, which research to date has shown to be less effective at reducing harm. These efforts not only waste resource, but in many cases also add unhelpful noise to an already difficult to engage audience.

In addition, we have found very few examples of interventions that have been thoroughly monitored and evaluated, impacting the ability for the sector to learn from previous efforts and continuously improve. It is assumed this is in part due to a lack of societal and sector based investment in agricultural harm prevention, leaving little funding for thorough observational or longitudinal studies and resulting in less robust means of evaluation of interventions.

We need to change the way we design interventions and monitor performance for learnings, this means:

- Focusing on the most prevalent problems and developing interventions that are underpinned by a strong theory of change.
- Investing in the monitoring and evaluation of performance
- Getting the right capability to support good practice i.e. investing in experts and partnering with research organisations to support intervention design, monitoring and evaluation
- Building greater awareness and understanding of important design concepts with organisations developing scalable interventions (such as sector leadership groups or supply chain influencers). This includes: knowledge of key harms, risk factors, and systems concepts (e.g. socio-ecological or Rasmussen's safety system) and theory (e.g. application of the hierarchy of controls and multi-faceted intervention design)

Lack of sustained focus and investment

It is clear sustained focus and investment has been an ongoing issue for health, safety, and wellbeing in New Zealand, including in the agricultural sector. There are issues in the current approach of both government, the supply chain and the sector more broadly.

We have heard from the sector, government funded activity appears piece-meal and there are examples of funding being withdrawn part-way through multi-year programmes with momentum, learnings and knowledge lost. An example of this is the FarmSafe programme which had positive sector reach being closed after 10 years of investment[10]. We have also heard and observed industry funded and resourced activity is discrete and disconnected and lacks line of sight to a set of common objectives sought by the industry as a whole. Both of these contribute to a fragmentation of effort and proliferation of messaging ultimately hampering progress.

In addition, there are limitations inherent in the current funding models. ACC and WorkSafe fund harm prevention activity, however, require establishing a clear economic return on investment. From an ACC perspective, this drives an inevitable focus on injuries rather than disease outcomes, in accordance with its mandate. Levy payers fund activity through the separate sector bodies of, for example, Dairy NZ and Beef and Lamb; however these are sub-sector focused, which may result in duplicative, disconnected or disproportionate effort and limit the likelihood of sensible cross-sector interventions.

It is important to build and sustain focus and investment to enable learning, iteration and development of interventions and ultimately drive success. This means:

- Minimizing cyclical discarding and re-starting of foundational work to reduce waste – resource and effort.
- Aligning key organisations that fund and resource harm prevention activity
- Where activity is not delivering the expected change, undertaking an examination of contributing factors is important, with iteration / adjustment left on the table as a potential way forward.

A sustained focus will build trust and confidence of the sector that such interventions are worthwhile

Farmer mistrust in work-related health data and lack of willingness to tackle the problem

Prioritisation and focus on work-related health has been a key issue across all sectors for many years, with the Independent Task Force on Workplace Health and Safety highlighting the issue in 2013.

Work-related health represents a significant contributor to the burden of harm currently experienced in Agriculture. This includes health issues caused by exposure to harmful chemicals and other airborne hazards, muscular stress injuries and psychosocial harm. It became clear through the process of developing this strategy and plan, the sector lacks awareness or has differing views on the extent of work-related health harm, particularly with regard to harm caused by agri-chemicals. In addition, stakeholders engaged through this process have questioned the validity of reports outlining estimated harm impacts done to date. It is suggested this due to:

- Difficulties comprehending or trusting the methods researchers employ to attribute exposure to harm; and
- The lack of recent agriculture specific research
- Belief practices have changes considerably over that time and therefore the estimates don't reflect improvements in Agricultural chemical practices

It is important to acknowledge many diseases with long lag and historical exposures are still manifesting and there are limitations to estimates which reflect historical patterns of hazard exposure. It is important to focus on the degree to which people are exposed to hazards now, and what the potential impact of that exposure may be.

It is important to establish better intermediate indicators which reflect current levels of on-farm exposures. These measures should support understanding of if practices have changed or are changing and if change in practice is significantly altering exposure and therefore the likely future harm profile.

In addition, we must work to build trust and confidence in science to inform evidence-based action in Agriculture.

Challenges we need to consider

There are other 'fixed' challenges inherent in the nature of agricultural work that represent context that we need to be aware of, but not seek to change. These have been considered through the strategy development and should continue to be considered through intervention design and delivery.

Difficulty engaging on-farm due to geographical distribution and proportion of 'owner operators' across the sector.

The agricultural sector has characteristics which make reach and change difficult. Farms are geographically distributed, and many have limited connectivity (both digital and physical) and 'control' of workplaces is distributed across many independent family/small operators.

Leveraging those who are already interacting with and influencing those working on-farm is key. This means the supply chain and value chain play a critical role in driving change on farm and must be engaged and active.

Market, adverse weather, and seasonal fluctuations and impact

Market fluctuations influence supply chain and on-farm behavior. We've heard from the sector through focus groups with a broad range of representatives that when the market prices are low, farm owners may have diminished wellbeing which impacts health and safety outcomes. In addition, seasonality and injuries have clear correlation – in peak seasons (shearing, calving, etc.) injuries relating to handling of animals will spike, alongside other incidents such as vehicle related accidents.

These market and seasonal fluctuations may be exacerbated with the increase of adverse weather events due to climate disruption. Adverse weather such as droughts or flooding significantly impact the Agricultural sector and add pressure (both physical and emotional) to an already demanding environment.

Market conditions, adverse weather and seasonality must be considered in all intervention design, particularly when staging intervention delivery

[10]*The FarmSafe Programme in New Zealand: Process evaluation of year one (2003). Morgaine, Kate, Langley, Rob and McGee, Rob O. 4, s.l. : University of Otago, Injury Prevention Research Unit, Department of Preventive and Social Medicine, Dunedin 9001, New Zealand, 2006, Safety Science, Vol. 44, pp. 359-371*

What is adding extra pressure right now:

Skilled labour shortages

Due to Covid-19, there are compounded workforce shortages across agriculture. This is a major concern for stakeholders across the sector, as it is introducing additional stress and demands to an already demanding environment. Owner / operators are struggling to find skilled workers, resulting in a potential influx of workers that do not have appropriate competency or owner / operators needing to work more to get the job done. Many are struggling to find short-term cover, meaning breaks from the farm and holidays are increasingly difficult.

This strategy and action plan has a role to play in supporting technology adoption where technology reduces resourcing requirements and/ or is a higher level control

Change overwhelm and leadership fatigue

Smaller farm owners and operators report that they have a lot on their plate. Job demands are high - they are already experiencing a significant amount of change. Day to day, farmers are managing:

- People
- The farm
- Animals and crops
- Business/finances
- Compliance
- Infrastructure and practice changes driven by regulatory change
- Perceived high levels of public scrutiny
- Transformation changes, such as environmental and water quality issues and have market fluctuations and skills shortages reducing their capacity to do so. Change fatigue is a real concern at a time of rapid regulatory change and increased business pressures from the response to the COVID-19 pandemic

- All intervention design must consider means and channels of communications and influence – pushing another 'to-do' on to small farm owners' growing list of priorities is unlikely to be effective.
- Ultimately, higher level controls (e.g. engineering solutions) are proven to be more effective and in many cases will reduce administrative burden for those working on farm
- we must focus on identifying, developing and promoting higher level controls to effectively protect our people.

1.4 Approaching system change

It is clear a system-wide approach is necessary to see substantive change to on-farm harm, however, there are some domains which influence health, safety and wellbeing outcomes that are outside the direct control of those working across the agricultural sector, for example, immigration policy limited supply of skilled labour.

This means significant and sustained investment in both **direct action** and **action to advocate and influence** is required.

Direct action

These are the initiatives where we, as a sector, have the skills, resource and scope to deliver change.

- These initiatives will primarily sit in the 'on farm' and 'immediate influencers' rings of the vision for a good system.

- These are the initiatives outlined in the strategy and action plan.

Action to advocate and influence

These are areas where we must have awareness of, engage with and actively influence and advocate for others to improve health, safety, and wellbeing of our sector.

- This is activity sitting in the 'wider influencing eco-system' rings of the vision for a good system
- This activity is beyond our mandate and broader than what we can directly control but building a system where we protect and value our people does require change across the system
- The organisations that have control levers in these areas may not be considering 'people' and on-farm health, safety and wellbeing within their decision-making processes. This may mean they are unconsciously positively or negatively influencing.
- There is a currently capability gap as no organisations or groups are currently working to influence at this level

- It is important for the sector to develop this capability. The development of the capability and initial opportunities to influence are outlined in the strategy and action plan

Part 2 - The sector's plan for change

2.1 Our vision

Everyday, farming people protect each other from preventable harm.

Farm Without Harm is about farming leaders supporting farming people to protect each other from preventable harm. It's a sector strategy, and commitment, to drive practical changes that prevents physical and mental harm to our farming whānau.

Our Strategy

Vision

Every day, farming people protect each other from preventable harm.

Outcomes

Those working agriculture are safe - Acute fatalities and serious injuries are substantially reduced	*Those working in agriculture are healthy - Health outcome for those working in agriculture is significantly improved*	*Those working in agriculture are well - there is an increase in the 'thriving' spectrum of mental health*	*The system is mature enough to respond to emerging risks and continuously improve health, safety and wellbeing*	*The sector has improved quality and productivity alongside safety as a result of better work design*

Goals

The agricultural sector values their people and recognises health, safety and wellbeing as an integral part of their 'culture of care' There is sufficient research and development, innovation and technology investment across the agricultural sector	The sector has access to useful and timely information on key harm areas and associated risk factors Interventions being delivered across the sector partner with researchers and/or are investing in credible monitoring and evaluation	There is sustained commitment from the sector and government to aligned activity Those working in and around agriculture have a proactive response to the health, safety and wellbeing of themselves and their team	Workers are highly engaged when it comes to working safely Those working in agriculture are experiencing significantly less serious workplace injuries and fatalities	The labour productivity rates are increasing (per unit of labour used) Those working in agriculture have low exposure to harmful chemicals and other airborne risks

Pillars of Action

System enabler					High impact activity			
Winning hearts and minds	Strong, visible and aligned leadership	Capacity and capability	Insights and learning	Technology adoption/ higher level controls	Psychosocial harm and wellbeing	Vehicle related harm	Agri-chem and exposures	Good work design and ergonomic interventions

Initiatives

• Rebrand HSW • Share examples of good practice • Engage on-farm influencers	• Develop leadership forums • Formalise strategy and action plan • Extend intiatives using supply chain influencers • Examine impact of HSWA • Coordinate key influencer messaging • Support community groups to lead	• Review training and guidance ecosystem • Investigate competency assessments • Deploy on-farm leadership programmes • Plot alternative worker engagement models	• Gather, analyse and share harm data • Undertake review of data • Develop monitoring and evaluation framework • Establish intelligence forum • Create data scheme	• Evaluate tech investment cost/benefit • Undertake review of data • Provide practical investment support	• Reduce rest and recover barriers for SMEs • Extend research on practices and tech innovations • Deliver campaigns on work demand management • Examine 'safe working hours' concept	• Improve CPD uptake • Support retailers to supply vehicle safety information • Advocate for mandatory safety training and helmet use • Assess current training availability and quality	• Explore modes of sharing chemical safety information • Clarify upstream possibilities • Develop community participatory approaches • Lobby for improved 'softer chemical' registration process • Improve access to specialist advice	• Develop seasonal training/fitness programme • Establish ergonomic design forum • Explore subsidies for ergonomic equipment • Build investment in cost/benefit case

2.2 The outcomes we are seeking

- Safety - Acute fatalities and serious injuries are substantially reduced.
- Health - Health outcomes of our people are significantly improved.
- Wellness – More of us live in the ‘thriving’ spectrum of mental health.
- Constant improvement – Our farming teams and systems are mature enough to respond to emerging health, safety and wellbeing challenges.
- Productive – We are the global leader in farming as a result of better work design.

2.3 Our goals

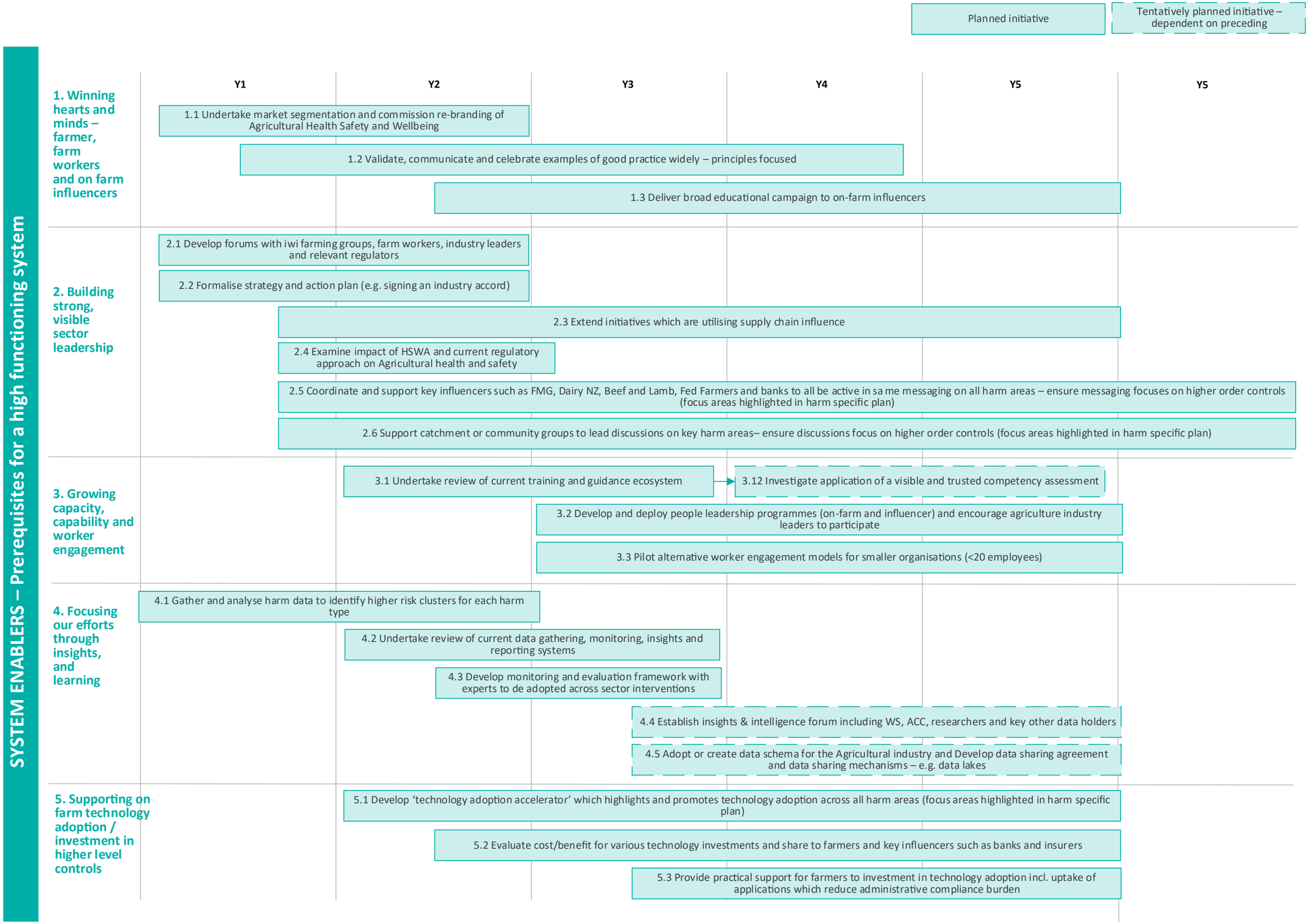
- The agriculture sector is recognised for valuing our people’s health, safety and wellbeing - our ‘culture of care’.
- There is sufficient research and development investment across the agricultural sector to support the strategy.
- We all have access to accurate, trusted, useful and timely information on key harm areas and associated risk factors.
- Interventions are developed in partnership with researchers with credible monitoring and evaluation.
- A sustained commitment from the sector and government.
- Farming people are proactive about the health, safety and wellbeing of themselves and their team and are highly engaged when it comes to working safely
- Farming people experience significantly less serious workplace injuries and injury fatalities.
- Farming people have low exposure to harmful chemicals and other airborne risks.
- Farming people are more productive due to reduced injuries and other harm.

2.4 The outcomes we are seeking

The pillars of action indicate what the sector commits to do together. These are divided into two broad areas – 1) wider system enabling actions and 2) harm-specific actions. The first group of actions is intended to build long-term sustainability and maturity across the agricultural sector by ensuring we have the 'ingredients of a good system' in place. The second group of actions is specifically focussed on those areas that were identified as requiring specific attention because of their currently highly impact. These actions are intended to have a more direct effect on farmers' health, safety, and wellbeing.

- Pillars - System enablers
- Winning hearts and minds – farmer, farm workers and on farm influencers
- Building strong, visible and aligned leadership, board room and on-farm
- Growing capacity, capability and worker engagement
- Focusing our efforts through insights, and learning
- Supporting on-farm technology adoption / investment in higher order controls
- Pillars – High impact activity focused on key harms
- Psychosocial harm and wellbeing
- Vehicle related harm
- Ergonomics and animal handling
- Agri-chemicals and exposures

2.5 Our plan


Planned initiative
Tentatively planned initiative – dependent on preceding
SYSTEM ENABLERS – Prerequisites for a high functioning system
Y1
Y2
Y3
Y4
Y5
Y5
1. Winning hearts and minds – farmer, farm workers and on farm influencers
1.1 Undertake market segmentation and commission re-branding of Agricultural Health Safety and Wellbeing
1.2 Validate, communicate and celebrate examples of good practice widely – principles focused
1.3 Deliver broad educational campaign to on-farm influencers
2. Building strong, visible sector leadership
2.1 Develop forums with iwi farming groups, farm workers, industry leaders and relevant regulators
2.2 Formalise strategy and action plan (e.g. signing an industry accord)
2.3 Extend initiatives which are utilising supply chain influence
2.4 Examine impact of HSWA and current regulatory approach on Agricultural health and safety
2.5 Coordinate and support key influencers such as FMG, Dairy NZ, Beef and Lamb, Fed Farmers and banks to all be active in sa me messaging on all harm areas – ensure messaging focuses on higher order controls (focus areas highlighted in harm specific plan)
2.6 Support catchment or community groups to lead discussions on key harm areas– ensure discussions focus on higher order controls (focus areas highlighted in harm specific plan)
3. Growing capacity, capability and worker engagement
3.1 Undertake review of current training and guidance ecosystem
3.12 Investigate application of a visible and trusted competency assessment
3.2 Develop and deploy people leadership programmes (on-farm and influencer) and encourage agriculture industry leaders to participate
3.3 Pilot alternative worker engagement models for smaller organisations (<20 employees)
4. Focusing our efforts through insights, and learning
4.1 Gather and analyse harm data to identify higher risk clusters for each harm type
4.2 Undertake review of current data gathering, monitoring, insights and reporting systems
4.3 Develop monitoring and evaluation framework with experts to de adopted across sector interventions
4.4 Establish insights & intelligence forum including WS, ACC, researchers and key other data holders
4.5 Adopt or create data schema for the Agricultural industry and Develop data sharing agreement and data sharing mechanisms – e.g. data lakes
5. Supporting on farm technology adoption / investment in higher level controls
5.1 Develop ‘technology adoption accelerator’ which highlights and promotes technology adoption across all harm areas (focus areas highlighted in harm specific plan)
5.2 Evaluate cost/benefit for various technology investments and share to farmers and key influencers such as banks and insurers
5.3 Provide practical support for farmers to investment in technology adoption incl. uptake of applications which reduce administrative compliance burden

HIGH IMPACT ACTIVITY

	Y1	Y2	Y3	Y4	Y5	Y5
6. Psychosocial harm and wellbeing	6.1 Extend investment in agricultural specific research to support innovative developments/good work design which mitigate fatigue related hazards e.g. sleep studies, research on different rostering approaches, technology development to drive efficiency					
	6.2 Enable influencers and community group to deliver coordinated campaign – identifying fatigue-related hazards and managing key hazards (such as work demands, duration and scheduling) which lead to fatigue					
	6.3 Design and deliver community participatory interventions which support prevention of key fatigue-related hazards (such as work demands, duration and scheduling)					
	6.4 Explore/advocate for WorkSafe to partner with Employment NZ to examine practicality and likely impact of adjusting employment laws to mandate 'safe' working hours for Agriculture					
7. Vehicle related harm	7.1 Support suppliers/retailers and importers to understand and disseminate relevant and digestible safety information (e.g. via adopting AU safety rating system), so vehicles purchased are safer					
	7.2 Focus 'technology adoption accelerator' on highlighting and promotes technology adoption including: technology which remove need for vehicles on unsafe terrain e.g. Arial alternatives and/or engineering products such as crush protection devices					
	7.3 Enable influencers and community group to deliver coordinated campaign based on hierarchy of controls – choosing the right vehicle for the job, protecting yourself with engineering controls (e.g. CPD), maintaining your vehicle etc.					
	7.4 Improve uptake of alternative vehicles to quads, or uptake of crush protection devices for existing quads, consider increasing subsidies and delivering sector-wide communications alongside establishing relationship with AU researchers monitoring impact of mandating CPDs					
	7.5 Assess existing availability and quality of vehicle handling and maintenance training programmes. Establish solutions if required. Consider: developing a targeted driver safety programme & training provider standards					
	7.6 Advocate for mandating driver safety training and helmet use (as per Canada) through legislative change or policy clarification					
8. Ergonomics and animal handling	8.1 Enable influencers and community group to deliver coordinated campaign based on hierarchy of controls – e.g. better work design to eliminate risk					
	8.2 Focus 'technology adoption accelerator' on design forum with farmers and manufacturers to solve ergonomic 'problems' (through work design/engineering controls) and share solutions					
	8.3 Explore subsidies for practice change support or equipment that reduces hazards (e.g. shearing harnesses)– prioritise based on hierarchy of controls					
	8.4 Establish monitoring programme to benchmark performance of investment in practice change, infrastructure and other ergonomic investments to build cost/benefit case					
	8.5 Develop pre-peak season (e.g. calving, shearing, harvesting) programmes which may include training and/or general fitness					
9. Agri-chem and exposures	9.1 Enable influencers and community group to deliver coordinated campaign based on hierarchy of controls – e.g. safer chemicals options, eliminating exposure, reducing exposure					
	9.2 Focus 'technology adoption accelerator' which highlights and promotes technology that removes human intervention e.g. 'No touch' solutions from chemical mixing and aerial tech					
	9.3 Deliver targeted campaign clarifying responsibilities for manufacturers, importers, suppliers and retailers and support them to disseminate relevant and digestible safety information in a coordinated manner					
	9.4 Improve access to specialist advisory services (e.g. through ACC subsidy) for carcinogens and airborne risks to Agriculture					
	9.5 Lobby for and support improved registration process for 'softer chemistry' e.g. closer regulatory harmonization with Australia on product approvals					
	9.6 Develop community participatory interventions such as a 'train the trainer' programme for peer led on-farm education and appropriate use, storage and application of chemicals					
	9.7 Explore mandating modes of communicating simple chemical safety information e.g. on product packaging similar to visible health star rating on products, and/or chemical safety register or system					

System enablers

1. Winning hearts and minds – farmer, farm workers and on farm influencers

It's 2030. The culture of care inherent in Agriculture has manifested in improved health, safety and wellbeing on farm.

Those working on farm knows what good looks like on farm and feel supported and enabled to make good happen. The farming community are all in it together – those working on farm, and those interacting with the farm expect people to be healthy and safe at work and feel comfortable raising concerns when practices are risky – they know it shows they care.

Insight	Aspiration	Initiatives	Impacts	Metric
67% have a low maturity safety culture – with attitudes and behaviour reflecting 'it's just common sense' or 'all talk, little walk'. The farming environment is designed for plant and animals, not people	People are put at the center of workplace design and decision making, and there is a clear and visible 'culture of care' for people on-farm and in farming communities which manifests to create a healthy and safe working environment	**1.1** Undertake market segmentation and commission re-branding of Agricultural Health Safety and Wellbeing	• Greater reach and impact of future communications	The agricultural sector values their people and recognizes health safety and wellbeing as an integral part of their 'culture of care'. **50%** of those working in and around Agriculture have a proactive response to the health safety and wellbeing of themselves and their team
		1.2 Validate, communicate, and celebrate examples of good practice widely using a principle focus	• Improved understanding on-farm of 'what good looks like' • Improved ability to adopt good practice	
		1.3 Deliver broad educational campaign to on-farm influencers (such as farming families, suppliers, consultants, banks, value chain)	• Wider and shared understanding of Agricultural harms • Farming communities and on-farm influencers have the tools and language to support positive behavior change	

2. Building strong, visible and aligned sector leadership

It's 2030, there has been a sustained and coordinated commitment to keeping those working on farm healthy and safe. The sector is proactive and self-regulating through supply chain driven initiatives, and government organisations are enabling others through effective engagement and appropriate regulation.

Supply chain participants are aware of and acknowledge the influence/levers they hold and the risks they introduce on-farm and are making decisions with the impact on people at the core. The sector has put competition aside to agree on minimum standards and works cooperatively to ensure these standards are met. There has been and continues to be sufficient and sustained funding to enable a consistent, coordinated focus on health, safety and wellbeing and the realization of this strategy and action plan.

Insight	Aspiration	Initiatives	Impacts	Metric
Sustained focus and investment has been an ongoing challenge for health, safety and wellbeing in New Zealand, including in the Agricultural sector There is effective activity happening in pockets, on-farm, through the supply chain, led by government and in the wider eco-system. These efforts would be more impactful and effective if they were aligned and coordinated and seeking to achieve or exceed common goals	The sector, including all supply chain participants, are persistently active in ensuring the people working on farms are healthy and safe and use their influence to drive positive change. This is supported by aligned and enabling activity driven by government, including regulation	**2.1** Develop forums with iwi, farm workers, industry leaders and relevant regulators	• Greater awareness across sector and government of risks they introduce into the system and impacts of decision making	A formal commitment to aligned activity incl. performance targets, ongoing resourcing and monitoring signed by **5** major supply chain influencers and supported by key government agencies
		2.2 Formalise strategy and action plan (e.g. signing an industry accord) and incl. a commitment to resource activity from key benefactors and stakeholders (e.g. ACC, WorkSafe, Industry)	• Improved alignment of harm prevention activity	
		2.3 Extend initiatives which are utilising supply chain influence	• Clear expectations and performance targets with monitoring mechanisms	
		2.4 Examine impact of HSWA and current regulatory approach on Agricultural health and safety	• Sustainable funding/resourcing of activity	
		2.5 Coordinate and support key influencers such as FMG, Dairy NZ, Beef and Lamb, Fed Farmers and banks to all be active in same messaging on all harm areas – ensure messaging focuses on higher order controls (focus areas highlighted in harm specific plan)	• Committed and visible sector and supply chain ownership and leadership	
		2.6 Support catchment or community groups to lead discussions on key harm areas– ensure discussions focus on higher order controls (focus areas highlighted in harm specific plan)	• Identification of opportunities to improved legislation and regulatory approach	

3. Growing capability and engagement on-farm

It's 2030. All those working on farm have good risk awareness and knowledge and understand and apply appropriate controls – where possible, controls that acknowledge humans make mistakes and keep people safe when those mistakes happen.

Training providers and guidance resources are good quality, applicable and accessible. They deliver good quality and digestible information on effective controls. All working on farm are engaged and participate in ensuring work is designed and delivered in a healthy and safe way.

Insight	Aspiration	Initiatives	Impacts	Metric
There are pockets of high-quality guidance and standards, however these are distributed across a multitude of channels and farmers have indicated this is difficult to 1) find and 2) understand how they relate. Farmers have indicated there are few local/ cost effective leadership and safety training providers, and it's difficult to distinguish the quality of those available. There are also barriers to uptake such as cost, location and ability to backfill resource for farm activities. Only 31% of workers in Agriculture are highly engaged when it comes to working safely	All people working on farm are engaged and active in keeping themselves and those around them healthy, safe and well. Work is designed with the health, safety and wellbeing of people in mind, and all those working on farm are competent to undertake their day-to-day activities in a healthy and safe way, but have safe-guards to allow for human error.	**3.11** Undertake review of current training and guidance ecosystem	• Training and guidance eco-system well understood, and improvement areas clear and actionable	Double the number **(62%)** of workers are highly engaged when it comes to working safely
		3.12 Investigate application of a visible and trusted competency assessment	• Clarity of if competency assessments are practical and value-adding	
		3.2 Develop and deploy people leadership programmes (on-farm and influencer) and encourage agriculture industry leaders to participate	• Leaders are well equipped to lead people and create healthy and safe working environments	
		3.3 Pilot alternative worker engagement models for smaller organisations (<20 employees)	• Workers are well supported and are engaged and participating in planning of work and health, safety and wellbeing discussions	

4. Focusing our efforts through insights, and learning

It's 2030. The sector has and continues to focus its efforts and resources well and is seeing measurable change as a result.

The sector is clear on key risks and the harm impacts across health, safety and wellbeing. It has leading and lag indicators to measure progress. Interventions have been designed with appropriate participation from experts such as harm prevention researchers with active participation from those the intervention is targeted at, and are being thoroughly monitored, evaluated. This monitoring and evaluation drives continuous learning and improvement so interventions are becoming increasingly effective.

Insight	Aspiration	Initiatives	Impacts	Metric
There are few examples of interventions that are proven to be effective through credible monitoring and evaluation, despite a long history of activity and investment. Intelligence is not currently being continuously shared across the government and sector groups. There is very little New Zealand specific research on the long-term health effects of exposure to agri-chemicals and airborne risks in Agriculture	The sector has the right expertise, information and insights to focus efforts effectively and continuously improve across all dimensions that influence health, safety and wellbeing on farm.	**4.1** Gather and analyse harm data to identify higher risk clusters for each harm type. Share with key stakeholders	Collective sector understanding of risk factors and high-risk clusters Focus of sector efforts improved	**50%** of interventions being delivered across the sector by major supply chain influencers and government have partnered with researchers and/or are investing in credible monitoring and evaluation **70%** of sector perceive they have access to useful and up-to-date information on key harm areas and associated risk factors
		4.2 Undertake review of current data gathering, monitoring, insights and reporting systems	Clarity of areas for improvement across information and insights to inform future work	
		4.3 Develop monitoring and evaluation framework with experts to be adopted across sector interventions	Improved sector understanding of credible monitoring and evaluation Improved monitoring and evaluation	
		4.4 Establish insights & intelligence forum including WorkSafe, ACC, researchers and key other data holders	Improved sector access to existing information and insights	
		4.5 Adopt or create data schema for the Agricultural industry and Develop data sharing agreement and data sharing mechanisms – e.g. data lakes	Better quality data and data democratized	

5. Supporting technology adoption and investment in higher level hazard controls

It's 2030. New Zealand is world leading in the development and adoption of innovative farming practices and technology that improves health, safety and wellbeing outcomes alongside productivity and profit.

Agri-tech is making risk controls more effective by providing cost effective options engineering solutions to remove or mitigate risks, reducing reliance on PPE, training and people making the right decision every time. Farm owners and farmers have information to inform and support decision making on technology investments and are clear on the return on investment from a people perspective as well as productivity and profit.

Insight	Aspiration	Initiatives	Impacts	Metric
There are innovative products in development and on the market that reduce risk through more effective risk control. Farmers have indicated there are barriers to uptake of these including the investment required & clear, credible and accessible information on ROI/ benefits (both financial and non-financial benefits).	The New Zealand agricultural community have the right information and support to be early adopters of technology that improves health, safety, and wellbeing	**5.1** Develop 'technology adoption accelerator' which highlights and promotes technology adoption across all harm areas	Clear value proposition to support investment decision making Greater investment in technology on-farm	**10%** increase in technology adoption on-farm across Agricultural sector
		5.2 Evaluate cost/benefit for various technology investments and share to farmers through key influencers such as banks and insurers		
		5.3 Provide practical support for farmers (advice and subsidies) to invest in technology adoption (e.g. engineering controls, ergonomic interventions or applications that reduce administrative compliance burden		

High impact activity focused on key harms

6. Psychosocial harm and wellbeing

It's 2030, those working in the agricultural sector are thriving, and the sector is looked upon as an exemplar of healthy and safe work.

The sector, including those working on farm and across the supply chain, understand and have proactively addressed factors that result in diminished wellbeing and psychosocial harm such as work demands, job control, sleep and support (management, peer, community and societal).

Insight	Aspiration	Initiatives	Impacts	Metric
Wellbeing has a significant impact on farm injury statistics, 24% of injured farmers surveyed attributed diminished wellbeing as the major contributor to their injuries	All those working on farm understand risk factors that may result in diminished wellbeing and psychosocial harm and have the ability to manage those risks effectively The supply chain and sector influencers are aware of and proactively managing risks they introduce on-farm (e.g. influence on job demands) and consciously managing any change agendas to mitigate psychosocial impact	**6.1** Extend investment in agricultural specific research to support innovative developments/ good work design which mitigate fatigue related hazards e.g. sleep studies, research on different rostering approaches, technology development to drive efficiency	• Sector clarity on practice changes and technology that will reduce fatigue and other psychosocial harm	Reduction in farmers reporting diminished wellbeing as a contributor to injury from **24%** to **15%**
		6.2 Enable influencers and community group to deliver coordinated campaign – identifying fatigue-related hazards and managing key hazards (such as work demands, duration and scheduling) which lead to fatigue	• Greater awareness across the sector of hazards and risk management responsibilities associated with wellbeing and psychosocial harm • Improved sector risk management of fatigue-related hazards	
		6.3 Design and deliver community participatory interventions which support prevention of key fatigue-related hazards (such as work demands, duration and scheduling)		
		6.4 Explore/advocate for WorkSafe to partner with Employment NZ to examine practicality and likely impact of adjusting employment laws to mandate safe working hours for Agriculture		

7. Vehicle related harm

It's 2030, New Zealand has the lowest rates of farm injury fatalities in the world – there are no fatalities on farm from quad rollovers, and other vehicle related fatalities and injuries have significantly declined.

Those working on farm are aware of the risks relating to vehicle use and are managing these through more effective higher order controls such as substituting less safe vehicles and/or deploying engineering controls to reduce the likelihood of life-altering harm occurring when things go wrong. It's easier for those on-farm to make safer decisions. Suppliers of vehicles enable better choices by providing advice and promoting safer vehicle choices, and the supply chain is active in reinforcing this messaging.

Insight	Aspiration	Initiatives	Impacts	Metric
Most on farm serious injuries and injury fatalities are relate to vehicle use. 4-wheel motor bikes (quads/ sxs) are the most prevalent vehicle type, represented in over 60% of all injury fatalities	Those working on farms are aware of and acknowledge the risks associated to vehicle use, and are proactive in preventing vehicle related harm by applying the hierarchy of controls – using a vehicle only where it is safe to do so, choosing the right vehicle for the job, and putting in place and/or wearing appropriate protection to reduce harm if things don't go as planned	**7.1** Support suppliers/retailers and importers to understand and disseminate relevant and digestible safety information (e.g. via adopting AU safety rating system), so vehicles purchased are safer	Consumers are enabled to make safer choices through improved access to relevant vehicle safety information	**50%** reduction of vehicle related on farm injury fatalities
		7.2 Focus 'technology adoption accelerator' on highlighting and promotes technology adoption including: technology which remove need for vehicles on unsafe terrain e.g. Arial alternatives and/or engineering products such as crush protection devices	Greater 'higher order' control options on the market and improved awareness of these options across the sector	
		7.3 Enable influencers and community group to deliver coordinated campaign based on hierarchy of controls – choosing the right vehicle for the job, protecting yourself with engineering controls (e.g. CPD), maintaining your vehicle etc.	Greater awareness and uptake of higher order controls across the sector	
		7.4 Improve uptake of alternative vehicles to quads, or uptake of crush protection devices for existing quads, consider increasing subsidies and delivering sector-wide communications alongside establishing relationship with AU researchers monitoring impact of mandating CPDs	Reduced likelihood of quad related serious injury and injury fatality	
		7.5 Assess existing availability and quality of vehicle handling and maintenance training programmes. Establish solutions if required. Consider: developing a targeted driver safety programme & training provider standard	Clarity on whether vehicle handling competency and maintenance are key contributing factors, and develop a clear pathway to address	
		7.6 Advocate for mandating driver safety training and helmet use (as per Canada) through legislative change or policy clarification	Improved competency of vehicle operators	

8. Ergonomics and animal handling

It's 2030, the New Zealand agricultural sector is recognized as a global leader in applied ergonomics, with those working on farm experiencing significantly lower muscular injuries than both foreign counterparts and other 'high risk' sectors.

The sector is proactive in identifying risks and works together and with ergonomists to design and bring to market game-changing ergonomic innovations – improving health and safety on farms. The supply chain and sector influencers, including the government, support the development and adoption of these innovations through investment, reducing barriers to market and active promotion.

Insight	Aspiration	Initiatives	Impacts	Metric
Many of the most common injuries resulting in more than a week away from work in Agriculture are sustained while handling livestock Injuries due to muscular strain were almost 40% of all WorkSafe recorded injuries resulting in more than a week away from work between July 2019 and June 2020 (across all sectors)	Those working on farms are aware of ergonomic risks and are proactive in reducing likelihood of injury by applying the hierarchy of controls. This is supported by an innovation eco-system driving practice improvement and equipment innovation development and uptake	9.1 Enable influencers and community group to deliver coordinated campaign based on hierarchy of controls – e.g. safer chemicals options, eliminating exposure, reducing exposure	Greater awareness and uptake of higher order controls across the sector	Reduction of week away from work (WAFW) injury rates associated with muscular injuries and/or stock handling by **25%**
		8.2 Focus 'technology adoption accelerator' on design forum with farmers and manufacturers to solve ergonomic 'problems' (through work design/ engineering controls) and share solutions	Improved availability and accessibility of suitable ergonomic interventions	
		8.3 Explore subsidies for practice change support or equipment that reduces hazards (e.g. shearing harnesses) – prioritise based on hierarchy of controls		
		8.4 Establish monitoring programme to benchmark performance of investment in practice change, infrastructure and other ergonomic investments to build cost/benefit case	Clear value proposition to support investment decision making	
		8.5 Develop pre-peak season (e.g. calving, shearing, harvesting) programmes which may include training and/ or general fitness	Improved on farm capability and competency	

9. Agricultural Chemicals and Airborne Risks

It's 2030, the New Zealand agricultural sector is known as being world leading in reducing occupational exposure to harmful chemicals.

All those working across agriculture understand the health risks associated with agricultural chemical exposure and other airborne risks and are proactive in managing this exposure utilising the hierarchy of controls. New Zealand is leading the world in developing and adopting practice and technology innovations that manage exposure, such as the adoption of chemical substitutions and development of engineering controls. This practice and technology shift has been enabled by value chain participants and government agencies working together to reduce barriers to research, development, and market.

Insight	Aspiration	Initiatives	Impacts	Metric
The use of pesticides and fertilizers are linked to neurological disorders and cancers. Across all sectors it is estimated a worker is 15 times more likely to die from a work-related disease than from a workplace accident, with an estimated 31% of annual work-related disability-adjusted life years (DALYs) lost linked to respiratory illness and cancers	Those working on farms are aware of and acknowledge the risks associated with chemical use and other airborne exposures and are proactive in reducing exposure, applying the hierarchy of controls. They seek to eliminate or substitute harmful chemicals in the first instance, rather than defaulting to administrative controls or PPE	9.1 Enable influencers and community group to deliver coordinated campaign based on hierarchy of controls – e.g. safer chemicals options, eliminating exposure, reducing exposure	Greater awareness and uptake of higher order controls across the sector	Reduction in occupational exposure to harmful chemicals. Specific metric to be established
		9.2 Focus 'technology adoption accelerator' which highlights and promotes technology that removes human intervention e.g. 'No touch' solutions from chemical mixing and aerial tech	Improved availability and accessibility of higher order controls	
		9.3 Deliver targeted campaign clarifying responsibilities for manufacturers, importers, suppliers and retailers and support them to disseminate relevant and digestible safety information in a coordinated manner	Supply chain are aware of and meeting their duties enabling consumers (those working on and managing farms) to make healthier and safer choices	
		9.4 Improve access to specialist advisory services (e.g. through ACC subsidy) for carcinogens and airborne risks to Agriculture	Improved chemical risk awareness and management on farm	
		9.5 Lobby for and support improved registration process for 'softer chemistry' e.g. closer regulatory harmonization with Australia on product approvals	Improved access to safer substitute chemicals	
		9.6 Develop community participatory interventions such as a 'train the trainer' programme for peer led on-farm education and appropriate use, storage and application of chemicals	Improved chemical risk awareness and management on farm	
		9.7 Explore mandating modes of communicating simple chemical safety information e.g. on product packaging similar to visible health star rating on products, and/or chemical safety register or system	Consumers (those working on and managing farms) are enabled to make safer choices and manage risk through improved access to relevant safety information	

2.6 Process to date

Scoping and establishment

In 2021, SaferFarms, a non-profit group established by leaders from across the Agricultural sector, commissioned KPMG to support the sector to develop a strategy and action plan in response to the concerning and persistent rates of harm experienced by those working on farms.

A steering group was formed which included:

- Al McCone, Agricultural Sector Engagement Lead, WorkSafe
- Dr Angela Mansell, Director of Engagement and Implementation, WorkSafe
- Colin Glass, Director, Dairy NZ
- Francois Barton, Executive Director, Business Leaders Health and Safety Forum
- Gerard Vaughn, Project Lead, FarmStrong
- Jack Raharuhi, Operations Manager, PAMU
- Justine Kidd, Managing Director, Kitahi
- Karen Williams, National Vice President, Federated Farmers
- Lindy Nelson, Chair, SaferFarms
- Dr Rebbecca Lilley, Injury Prevention Research Unit, University of Otago
- Rob Hanratty, Risk and Compliance Manager, Te Tumu Paeroa
- Roger Weldon, GM Health and Safety, Fonterra Farmsource
- Virginia Burton-Konia, Manager Workplace Safety, ACC

Information gathering

The purpose of the information gathering stage was to build a common understanding of the current state, including clarifying the 'case for change', key problems and potential levers of change.

The process included gathering information from a range of sources and distilling this information down to a format that could be shared and commonly understood by the steering group and a broader range of stakeholders.

The sources used in the initial information gathering included:

Secondary research, including a review of literature spanning:

- health and safety systems theory
- intervention design theory
- evaluations of historic national and international interventions across agriculture and several other high-risk sectors
- research on health and safety attitudes and behaviour in New Zealand's agricultural sector

- New Zealand's agricultural health, safety and wellbeing statistics including historic and current performance
- international examples of strategies for improving health, safety, and wellbeing

Interviews with subject matter experts (including researchers and those working on and around farms). Those interviewed included:

- Brendan O'Connell, CEO Agritech NZ
- Cheyenne Tasman, Young Farmer
- David Williams, Milk Supply Manager, Synlait
- Garth Gulley, Health and safety consultant, KPMG
- Grant Jackson, GM Milk Supply, Miraka
- Jack Keeys, KPMG Agri-food research and insights analyst, KPMG
- Jock Richardson, CFO, FarmIQ Systems
- Mike Crossan, Executive GM, Primary ITO

Exploratory workshops with the steering group to steer further research

This information gathering exercise resulted in an 'information sharing pack' which included suggested key harm focus areas based on harm statistics, theoretical models to support strategy and intervention design, 'thought starters' on challenges and opportunities and examples interventions.

Stakeholder Engagement

The purpose of the stakeholder engagement stage was to hear from a broad range of sector participants and influencers, test findings from the information gathering and identify intervention opportunities.

The process included sharing and testing the information gathered to date in a workshop setting, curated to have a broad range of relevant perspectives, working through activities to identify factors that influence on-farm safety performance and identifying intervention opportunities to address these factors.

Over 60 participants attended full-day workshops in Hamilton, Wellington & Ashburton. Attendees included farmers, farm managers, suppliers, health and safety professionals, trainers, supply chain representatives, insurers, representatives from iwi farming organisations, representatives from local community groups, representatives from influencing government organisations and more.

All participants were sent the output from the information gathering phase, the 'information sharing pack' and participated in exploring the harm experienced on farm. The participants were engaged in a general discussion on harm, and then grouped for deeper exploration on particular topics. Participant groups were asked to consider common a harm scenario (such as a quad bike rollover), and undertook a range of activities to uncover factors that may have influenced that incident - working from the decisions and actions on the day to broader influencing factors such as training and education, supply chain pressures or policy.

This resulted in a rich set of influencing factors and intervention opportunities, gathered from a diverse set of perspectives across the sector and beyond. These factors and opportunities were further analysed, clustered and researched, resulting in a 'long list' of intervention opportunities.

Thanks to participants who attended:

- Afzal Khan, Project Delivery Specialist, Worksafe
- Al McCone, Engagement Lead, Worksafe
- Alison Stewart, CEO, Foundation for Arable Research
- Angela Hogg, Rural Segment Manager, Farmers Mutual Group (FMG)
- Anthony Butcher, Group Health and Safety Manager, PGG Wrightson
- Ashley Koning, Addiction Programme Lead, Te Pou
- Barbi Harrison, Human Resources Business Partner, AgResearch
- Ben Brown, Group Manager – Health and Safety, Gallagher
- Brad Osborne, Area Livestock Manager, PGG Wrightson
- Brendon O'Connell, CEO, Agritech
- Brent Austin, Manager – Regulatory Practice, Worksafe
- Brian Dela Rue, Research Engineer, DairyNZ
- Callum Eastwood, Scientist, Dairy NZ
- Caroline Amyes, Agri Relationship Partner, Craigmore Farming
- Cath Blake, Training Coordinator, DairyNZ
- Char Porima, Health and Safety Advisor, Ngai Tahu Iwi
- Cheyenne Wilson, Regional Chair, Young Farmers
- Chris Leach, General Manager – Business and people development, QCONZ
- Chris Lewis, Board Member, Federated Farmers
- Cobus Kilian, Health, Safety and Environment Manager, Livestock Improvement Corporation (LIC)
- David Shovel, Manager – Health, Safety and Compliance, AgResearch
- David Williams, Milk Supply Manager, Synlait
- Donna Nugent, Health and Safety Coordinator, AgResearch
- Erin Pemberton, National Health and Safety Advisor, Fonterra
- Ewan Kelsall, Senior Policy Advisor, Federated Farmers
- Eve Williams, Project Lead, Pathways Into Primary Industries
- Fiona Gower, President, Rural Women NZ
- George Kerse, Business Manager – Agrichemicals, Ravensdown
- Geoff Tayler, Project manager – People and Business, DairyNZ
- Graham Neate, Health and Safety Manager, Philip Wareing
- Grant Jackson, General Manager - Milk Supply, Miraka
- Hannah Alderton, Design Lead, Worksafe
- Jan Houston, Health and Safety Consultant, Primary ITO
- Jane Fowles, Health and Safety Manager, Dairy Holdings
- Jane Muir, People Team Leader, DairyNZ
- Jane Mair, Principal Learning Designer, Open Polytechnic
- Jenny McDonald, National Finance Chair, Rural Women
- Jock Richardson, CFO, FarmIQ Systems
- Jo Sheridan, Demonstration Manager, Owl Farm
- Jules Benton, CEO, Dairy Women's Network
- Karen Williams, Vice President, Federated Farmers
- Katrina Berry, General Manager – Safety and Wellbeing, Ngai Tahu Iwi

- Kim McNarama, Technical Field Representative, Farmlands
- Margaret Simpson, Health & Safety Wellbeing Manager, Rakaia Island
- Mark Ogilvie, Head of Health, Wellbeing and Safety, Landcorp Farming
- Paul Edwards, Farm Manager, Landcorp
- Paul Goldstone, Policy Manager, Meat Industry Association
- Paul McGill, Business Manager, Landcorp Farming
- Peter Jacob, Compliance Manager – Rural Co
- Rhys Roberts, CEO, Align Farms
- Rob Markillie, Director, Core HS
- Roger Barton, Farmer, Wairarapa
- Simon Bailey, Academic Leader – Primary Industries, Universal College of Learning (UCOL)
- Stephen Cantwell, Advice Services Manager, Farmers Mutual Group (FMG)
- Steven Knudsen, Farmer, Vertigo Station
- Steven Percival, Health and Safety practitioner, North East Safety
- Taane Johnsen, Milk Supply Manager, Westland Milk Products
- Tom Buckley, Farm Manager, Owl Farm
- Will Burrett, General Manager – Farming and Forestry, Ngai Tahu Iwi
- Zander Engelbrecht, Ag Research

Of course, the opinions expressed in this document are not specifically endorsed by the individuals listed here, but were informed by them.

Strategic Plan Development

The purpose of the strategic plan development phase was to form and gain initial steering group consensus on the strategic direction of this plan including the vision, goals, 'pillars of action' and develop a roadmap of interventions over a 5-year period.

The process included sharing findings and outputs from the stakeholder workshops, facilitating conversations and workshops to uncover strategic direction, facilitating deeper discussions on the 'long-list' intervention opportunities and agreeing and phasing interventions across a five-year period.

The process resulted in this strategy and action plan, developed for the sector, by the sector with the support of KPMG.

How was this framework developed?

In identifying these influencing factors, we looked to a range of known theoretical frameworks for health and safety.

Firstly, we were influenced by Rasmussen's socio-technical systems model[6]. This model is underpinned by the idea that systems comprise of various levels of impact and authority, and that actions and decisions across these levels interact with one another to shape behaviour, safety, and accidents.

Secondly, we also acknowledged that the 'workplace' in the agricultural sector has some dominant characteristics that pose increased risks of harm – there is often no distinction between those that own the farm, manage the farm and do the work. A large proportion of the agricultural workforce live in the same environment in which they work, and agricultural work is often solitary. Further, the sector has a strong sense of local community. For these reasons, we considered socio-ecological systems theory[7], which looks at the individual within the context of the system of relationships that form their environment (their affiliations to people, organizations, and their community).

[6] *Risk Management in a dynamic society: A modelling problem . Rasmussen, Jens. 2, Denmark : Safety Science , 1997, Vol. 27.*
[7] *Using the Socio-Ecological Model to Frame Agricultural Safety and Health Interventions. Lee, Barbara C, et al. 4, s.l. : Taylor & Francis (Routledge), August 2017, Journal of Agromedicine, Vol. 22.*

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PĀMU

Safer Farms

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New Zealand