



KELLOGG
RURAL LEADERSHIP
PROGRAMME



Old dogs, new tricks

An exploration of age and its influence on health
and safety in New Zealand's primary sector

Kellogg Rural Leadership Programme

Course 40 2019

Nicky Barton

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



Old dogs, new tricks

AN EXPLORATION OF AGE AND ITS
INFLUENCE ON HEALTH AND SAFETY
IN NEW ZEALAND'S PRIMARY SECTOR

Kellogg Rural Leadership Programme
Nicky Barton

November 2019



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The aim of this project is to explore the relationship between age and influence in health and safety on New Zealand farms. This research endeavours to understand at what age people are being fatally injured, how they are being fatally injured and if attitude towards health and safety is varied across age groups.

I intend to create some recommendations that guide the focus of regulatory activity, give insights to stakeholders and levy bodies and provide ‘food for thought’ to those stepping out onto farms every day that encourages a safer approach to their work.

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Thank you to WorkSafe New Zealand for financing my Kellogg Rural Leadership course, for permitting me time out of the office and for giving me the freedom to pursue my leads in the agricultural sector without question.

Thank you to my family for my spectacular and safe rural upbringing, for supporting me this year in my Kellogg endeavours and to Mum and Dad for housing and feeding me for six months of this year. I am enormously proud to also be a second generation Kellogg scholar, following in my father's 1989 footsteps.

Lastly I would like to thank my Kellogg colleagues for their continual inquiry into both my personal and professional selves, for their probing of my views and positions and for building my confidence and sense of self immeasurably.

EXECUTIVE SUMMARY

Being a great food producing nation comes at the price of almost 20 lives per year in New Zealand. Agriculture records the highest number of deaths of all industries and improving these statistics has proved a challenge for successive regulatory bodies, industry groups and farmers themselves.

Almost a quarter of these deaths are those aged in their 60s and when combined with the number of workers over the age of 70 the group makes up almost half of all fatalities on-farm. It raises the question of what influence one's age has on health and safety behaviours and outcomes?

This report endeavours to uncover at what age people are being fatally injured, how they are being fatally injured and if attitude towards health and safety is varied across age groups. This report considers the 154 deaths on New Zealand farms between 2011 and 2018, and the views of five WorkSafe inspectors and 76 farmers aged between 19 and 73. It also takes a look at past research and reporting on health and safety progress and prohibition in New Zealand.

The research uncovers a challenge to all in the rural health and safety system; that when farmers are at their most experienced and perceived to be most adept at assessing risk they are also being fatally injured in the highest numbers. And while experience reigns high at this age, so do a decrease in cognitive ability, physical limitations, overestimation of ability and a decrease in responsibility as farmer's face mortality.

Leadership, education and a sense of responsibility should be encouraged from a young age in order to create sustained generational change. And by looking at the gaps in knowledge and approach; and focussing on motivating factors in certain age groups we can improve health and safety behaviour and outcomes on New Zealand farms.

As an industry, we now need to engage with those in their early career years to create sustained generational change, utilise the theme of responsibility in working to engage all farmers in health and safety and alert industry to the four factors this research considers contributing factors in older farmer fatalities.

METHODOLOGY

- Thematic review to understand common themes in health and safety literature.
- Five WorkSafe inspectors, with experience working with agricultural businesses, completed surveys or were interviewed regarding their views and experiences (see appendix).
- 76 farmers completed a survey (see appendix) of nine questions collecting demographic details and asking questions on:
 - awareness of the requirements of the Health and Safety at Work Act 2015
 - their individual health and safety approach
 - incidents and 'uncomfortable moments' on farm
 - their views on age and health and safety.

0-9	0	40-49	11
10-19	1	50-59	8
20-29	17	60-69	16
30-39	20	70+	3

- The data set used to review the incidence and type of fatalities was extracted from the WorkSafe website and covers the period of 2011-2018. WorkSafe breaks its data down into five year brackets. For the sake of this study the data was broken into ten year groups from 0-9 to 60-69 and a 70+ age group. A total of 154 fatalities were considered.

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1.0

Introduction

IN THIS SECTION:

- 1.1 Unpacking New Zealand's rural health and safety record
- 1.2 Lots of acronyms, little progress - a history of health and safety in New Zealand
- 1.3 Rural perceptions of health and safety regulation

You don't have to go far in New Zealand to cross paths with someone affected by a workplace injury or death.

If you pull that to within the agricultural sector you needn't go very far at all.

The rural New Zealand upbringing has been marred by an unprecedented loss of life and creating a positive health and safety culture has been an uphill battle for regulators, industry bodies, levy organisations and farmers alike.

In what is frequently referred to as an inherently dangerous industry, it remains difficult to look past the level of harm occurring on-farm as simply the risk of the job. And calls to just use common sense certainly can't apply to that of a small child participating in farm activities.

This leads to the consideration of age on farm and how this plays into competence in assessing risk, astute decision making and leadership.

Ageing refers to the biological, physiological and social changes that occur at different rates among individuals (Van Eerd, Smith, & Vu, 2019).

In today's world, in a single workplace, you can have four generations of workers who grew up in different eras and who bring a variety of experience levels, knowledge bases and cultures to a job (Vargas, 2017). It is therefore little wonder that we see such differences in the health and safety outcomes and attitudes of those from different age groups and eras.

When it comes to farming, the variance of age on a single property can consist of four generations also. From children living in the farm house to those past retirement age who are still willing to give a good day's work – or want to stay involved on a property they have invested most of their lifetime in.

One thing is for sure, New Zealand workplaces can't treat themselves as a case for survival of the fittest. Everyone has a part to play in creating a safe work environment, but how that approach changes at different ages has not been extensively explored here in New Zealand, particularly when we look on farm.

1.1 Unpacking New Zealand's rural health and safety record

Agricultural work is the most prevalent type of employment in the world (Frank, McKnight, Kirkhorn, & Gunderson, 2004). When we look at how the industry has improved its ability to produce food, farmers have paid a clear price for this perceived progress. An increase in mechanisation, the use of chemicals and modern production methods can all be identified as increasing the risks posed to the health and wellbeing of agricultural workers.

It is no different here in New Zealand where being a great food producing nation comes at the price of almost 20 lives per year on average.

In the eight years 2011 to 2018, 154 people lost their lives while farming. That is more than any other industry in New Zealand, and only second to forestry in the rate of fatal harm occurring to workers. It is clear that as an industry that generally lives where it works and works where it lives, it must to do better to keep its own people alive.

The most shocking year in recent times was 2013, where 24 people lost their lives in farming. The youngest of which was just 1 and the oldest was 76.

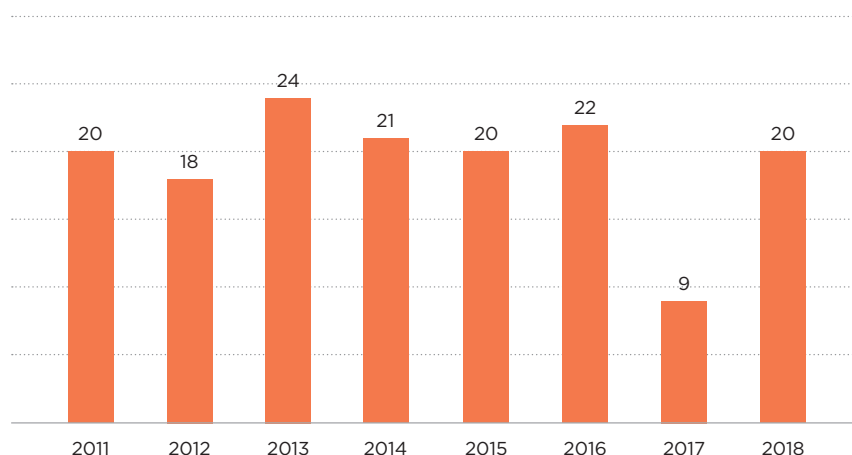


FIGURE 1.
Total number of agricultural fatalities between 2011 and 2018 grouped by year, data obtained from WorkSafe.

New Zealand's accident rate across all industries is twice that of Australia and four times that of the United Kingdom (Balls, 2014). These striking rates also apply on New Zealand roads, where despite low traffic volumes we kill each and maim each other at higher rates than comparable countries (Balls, 2014).

The cost of workplace injury in New Zealand sits at round \$3 billion per year (as at 2014) (Davie & Lilley, 2018). This does not consider the social cost and emotional impact of lives lost and loved ones left behind.

Older people in New Zealand are working longer than ever before and by 2023 Davie and Lilley estimated that one in three workers would be over the age of 45. New Zealand also has the fourth highest rate of work participation beyond 65 years old in the OECD (Davie & Lilley, 2018). So we know that New Zealand has an increasing concentration of older workers, and workers working longer than ever before. But longer working lives comes with its own set of challenges.

Research indicates that both younger and older workers are more susceptible to injury in the workplace.

Statistics New Zealand say that those 75 and older and younger workers (aged 15-24) have the highest injury rates in New Zealand (StatsNZ, 2018). Davie and Lilley's research indicated more injury-related disability reported in workers aged 45 and over, than in younger age groups (Davie & Lilley, 2018). Research also consistently indicates that the older you are, the longer your return to work takes (Van Eerd, Smith, & Vu, 2019).

What is conclusive in literature is that the older you are, the longer your return to work will take and the more likely your injuries are to be fatal.

There appears to be a safe 'sweet spot' that lies in the middle, when workers are between the age of around 25 and 45. In New Zealand, it is at these ages that a lower number of fatalities and injuries appear to occur.

1.2 Lots of acronyms, little progress – a history of health and safety in New Zealand

New Zealanders have been pioneers in the area of worker rights and health and safety, with the first piece of legislation relating to health and safety introduced in the 19th century (Pashorina-Nichols, 2016).

The Employment of Females Act of 1873 and the Factories Act of 1891 dealt with hours of work, holidays, sanitation and ventilation (McLintock, 1966). Throughout the 1900s, workplace rights and health and safety legislation introduction and reform focussed on labour age, hours of work and workplace conditions (including provision of first-aid and fire escapes). Specific regulations were also designed to consider the risks associated with certain substances, work activities and machinery.

As early embracers of regulations that showed such consideration for the workforce, it makes it hard to comprehend why our health and safety record stacks up so abysmally against countries so similar.

By the late 1970s it is fair to say that health and safety regulation in New Zealand had begun to get very complicated as it was delivered through six key agencies and various legislation (Gribble, Mortimer, & Smith, 2006). That dysfunction would reign for the next three decades.

In 1988, reform consolidated the large number of prescriptive industry-specific acts and regulations overseen by various agencies into one business unit within the Department of Labour: the Occupational Safety and Health Service (OSH Service) (Armstrong, 2010). In 1992 the Health and Safety in Employment (HSE) Bill was passed and by 1996 a new set of regulations, the Hazardous Substances and New Organisms Act 1996 (HSNO), was put in place to look at workplace management of substances (Davie & Lilley, 2018).

Max Rashbrooke suggested in his December 2016 article in Public Sector magazine that New Zealand had erred fatally in the 1990s with its lack of incentives and deterrents when it came to health and safety regulation. There were low penalties and a low likelihood of inspector visits, and on reflection it is clear that New Zealand had developed a risk tolerant culture of stoicism and deference to authority.

That culture saw the commissioning and ultimate failure of Pike River Mine, culminating in the devastating explosion that killed 29 men in November 2010. The desire for economic success outweighed the need to keep workers safe, and those with vested interests sitting around boardroom tables had little idea or input into what was actually taking place on the West Coast.

This tragedy prompted a Royal Commission of Inquiry into the events at Pike River and the Independent Taskforce on Workplace Health and Safety. The result was the recommendation of a standalone Crown agency and an overhaul of legislation.

The recommendations were delivered in the form of WorkSafe New Zealand and the Health and Safety at Work Act 2015 (HSWA) - the first piece of major legislative reform since the very early 1990s.

Baker, 2016 described HSWA as no longer just the boss and the worker, but placing responsibility on everyone from the boardroom to suppliers, joint venture partners, sub-contractors and their subbies. Following the failures at Pike, it was clear that the system needed an overhaul and one that placed responsibilities for health and safety throughout the supply chain.

Limited enforcement of the HSE and low levels of compliance across industries posed a significant challenge to WorkSafe as a newly established regulator. WorkSafe's job is to educate, engage and enforce in workplaces, and the way the agency has exercised this remit has changed drastically in the six years since its inception.

WorkSafe set out its expected hierarchy of controls in the Health and Safety at Work (General Risk and Workplace Safety) Regulations 2016. It asks workplaces to eliminate risks where possible. If the business can't eliminate the risk, then it should minimise the risk by substituting the hazard giving rise to the risk, isolating the hazard or implementing engineering controls. If the risk remains then the business should consider implementing administrative controls such as using personal protective equipment. These could be considered a more pragmatic set of requirements and controls than the hi-vis vest and red tape reputation that has plagued New Zealand's health and safety brand.

Employer liability and worker compensation have also existed in New Zealand since the 19th century. The origins of today's Accident Compensation Corporation (ACC) system lay in the 1882 Employers' Liability Act and later the Workers' Compensation Act 1900. The legislation gave workers a mechanism to claim against an employer where they had proof of negligence (McLintock, 1966).

This system of insurance and indeed assurance was later seen in the ACC model founded in New Zealand in the early 1970s and is now included under the Accident Compensation Act 2001. The system allows ACC to pick up the direct costs of injury and compensate for loss of income through an employer levy system (Gribble, Mortimer, & Smith, 2006). But it also prompts the question of whether this system has engendered reckless behaviour as pondered by Balls 2014, and could this have actually played into the laxity and poor health and safety record that New Zealand has garnered.

"New Zealand appears unable to connect the dots between investing in the latest plant and equipment, low injury rates and higher outputs/profits...a very high price for this go-it-alone she will be right attitude."

HEALTH AND SAFETY NOT IN OUR DNA (BALLS, 2014)

1.3 Rural perceptions of health and safety regulation

Within agriculture, the introduction of HSWA was met with challenge from the rural community - not too dissimilar to the reactions to the Essential Freshwater and Zero Carbon reforms proposed this year.

There was a perceived misplaced focus on enforcement from WorkSafe of low probability, peripheral hazards, rather than the key risks that cause accidents (Neal, 2016). In Neal's study, she specifically looked at hill country livestock farming which she described as a unique industry with a culture of stoicism, pragmatism and self-sufficiency. That concept of stoicism is frequently referred to in New Zealand health and safety literature.

The agricultural environment is also starkly contrasted with contained workplaces like factories and the rural community felt that HSWA constrained the traditional family-work integration often seen on rural properties (Neal, 2016).

It might sound shocking, but New Zealanders should count themselves lucky to be regulated. In Liebman and Augstave's 2010 study, the authors reflected on the historical exemption of agriculture from regulatory oversight in the United States. Farm worker protection was markedly absent from legislation with the desire for economic survival outstripping worker health and safety priorities (Liebman & Augustave, 2010). Surely this can't be an acceptable framework for New Zealand farmers to operate on? But that is not the only time this rhetoric is touched on in this report.

Cam Brown's 2015 Kellogg Report looked into farmer attitudes and frameworks for changing health and safety culture following the introduction of HSWA. He concluded

from interviews that the industry had “demonstrated almost a failure to understand the need for change” and noted a strong feeling that people should just be using common sense.

He noted that the largest difference in the attitudes of key players in the agriculture and forestry sectors was that those involved in forestry recognised they had a serious health and safety problem, where those in agriculture did not (Brown, 2015).

When looking at the establishment of WorkSafe, Brown identified confusing regulations and a weak regulator as consistent issues. WorkSafe stumbled in its establishing years to get both farmers and stakeholders alongside, as the industry struggled to delineate between inspectors visiting to educate - or when they were there to enforce. This raises a question of what progress the regulator has made in the interim.

Interestingly, Brown also found that farmers consistently over-estimated their ability to manage health and safety and had a skewed perception of what good health and safety management looked like.

“The Independent Taskforce on Health and Safety was critical of New Zealanders’ ‘high level of tolerance for risk, and negative perceptions of health and safety’ which is the result of ‘kiwi stoicism, deference to authority, laid-back complacency and suspicion of red tape’. This is particularly reflective of hill country livestock farming.”

(NEAL, 2016)

In Clay et al’s 2016 study of quad bike safety, the authors identified four key influences on risk perception. These included the impact of previous incidents, personal attributes, being familiar and getting the job done. In their study, all participants associated age with quad riding experience and participants considered farmers with more experience to be more adept at assessing risk.

Young farmers with less experience were perceived to have different priorities and risk was not considered as often. A number of participants reflected on how fearless their riding had been when they were younger and that a motivator of this fearless approach was that they wanted to be seen as good workers who got lots of work done. The study also found that having a sense of responsibility towards others was a powerful driver in perceiving more risk, something echoed in the research below.

2.0

Discovery

IN THIS SECTION:

- 2.1 How many people die and at what age?
- 2.2 Mechanism of fatal harm on farm
- 2.3 A WorkSafe perspective
- 2.4 The farmer's perspective

2.1 How many people die and at what age?

In considering the number of people dying on farm, and the age at which their fatal injuries occur, a few distinct patterns emerge.

- The 60s age group recorded the highest number of fatalities consisting of 37 deaths out of the 154 considered. That is almost 25% of all deaths on farm.
- Older workers aged in their 60s and over 70 recorded the highest number of fatalities out of all age groups, almost twice that of the other age categories combined.
- Fatal injuries of people in their 60s remains consistently high, while those in their 70s fluctuates from lower to very high year on year.
- It remains stark that 10% of deaths on farm come from those under the age of 20. Many of these individuals are yet to enter the workplace and for many, their age indicates they were likely in the care of an adult.
- No clear patterns emerge across the eight years of records that show a certain age group increasing or decreasing in incidence of fatal injury.
- In 2018, five people in their 20s died on farm. An increase of four on the year prior.
- There were no fatal injuries in those aged 10-19 and 30-39 from 2016-2018.

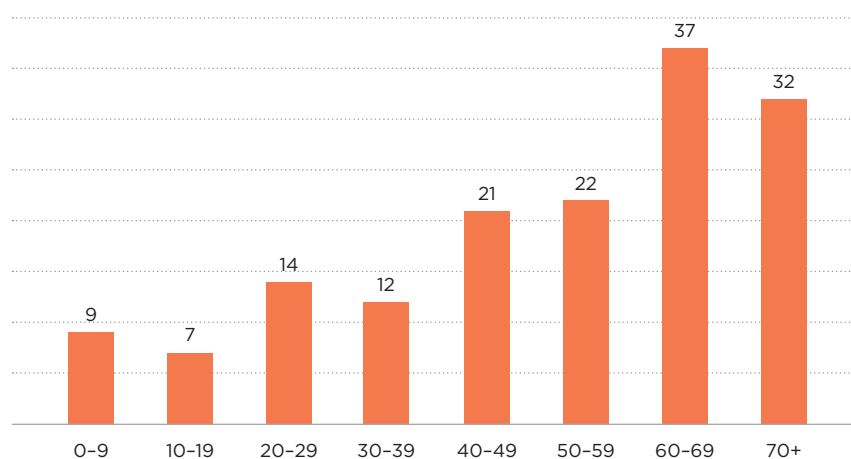


FIGURE 2:
Total number of fatalities
between 2011 and 2018
grouped by age group,
data obtained from
WorkSafe.

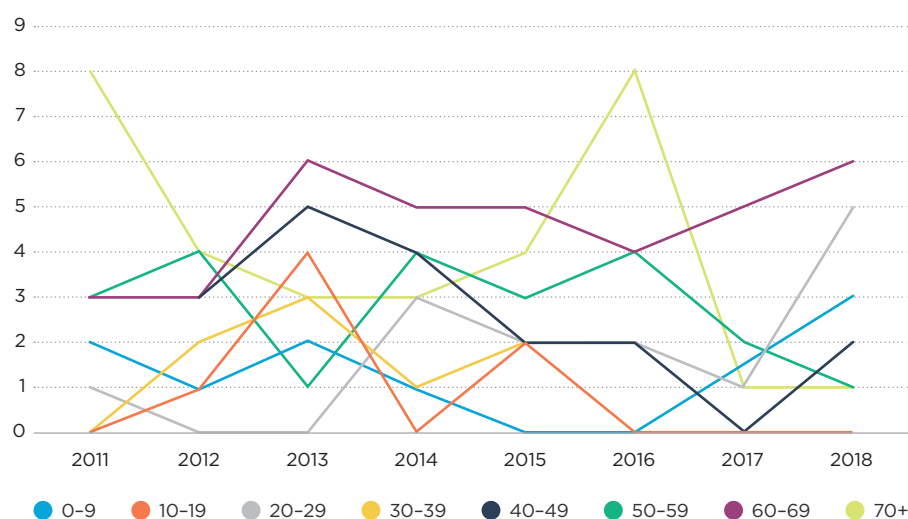


FIGURE 3:
Total fatalities each
year by age group
between 2011 and 2018,
data obtained from
WorkSafe.

2.2 Mechanism of fatal harm on farm

There is very little difference in the way people are fatally injured between age groups.

- Vehicles are the dominant cause of fatal harm across all age groups.
- 4-wheel motorbikes remain the leading cause of fatal deaths across the age groups with the exclusion of those in their 30s, who were more commonly fatally injured in incidents involving utes or trucks.
- There were 69 4-wheel motorbike fatalities across all age groups versus 28 tractor fatalities.
- Tractors were the second most common cause of death in people between their 30s, 50s and 60s.
- The 70+ age group showed the greatest variance in mechanism of fatal harm, with 32 deaths fitting into 17 different classifications. Note this age group does not report the highest number of deaths.
- The 10-19 age group shows the lowest variance in mechanism of fatal harm, this group also reports the lowest number of deaths.

AGE GROUP	MOST COMMON MECHANISM OF FATAL HARM
0-9	4-wheel motorbike/tractor/truck or ute
10-19	4-wheel motorbike
20-29	4-wheel motorbike/caught or trapped in machinery/tractor
30-39	Truck or ute
40-49	4-wheel motorbike
50-59	4-wheel motorbike
60-69	4-wheel motorbike
70+	4-wheel motorbike/tractor

TABLE 1:
Most common
mechanism
of fatal harm for
each age group,
data obtained from
WorkSafe.

Note: Side-by-sides are not yet classified as a vehicle in their own right by WorkSafe or ACC. They are classified as 4-wheel motorbike – so it is impossible with the data set reviewed for the sake of this project to differentiate between the traditional quad bike or side-by-side under the 4-wheel motorbike classification.

2.3 A WorkSafe perspective

When asking the regulator for their views on age and influence in health and safety, some distinct themes came through from inspectors on the ground visiting New Zealand farms every day.

Inspectors could see a reluctance to engage in health and safety and the expectations of WorkSafe from older farmers. Inspectors put this down to the damage done by the OSH brand to the relationship between regulator and farmer. There was also difficulty in quashing lifelong habits from farmers – who had “always done it that way” so could see no reason to change or adjust their behaviour or approach. One inspector reflected that at least farmers were upfront about this approach – but it meant they had to resort to enforcement orders to gain compliance – rather than the farmer being motivated to do the right thing themselves.

An inspector considered that care for animals and the environment, frequently came before their care for people.

One inspector's observation was that there was a real "leave us alone" mentality at the introduction of HSWA. But as socialisation of the Act and familiarity with the requirements has increased, WorkSafe saw some self-regulation in the sector. Usually that took the shape of younger to middle aged farmers, calling out older farmers and asking them to come into line, especially in public forums.

There was a perceived mentality in farmers that when someone was injured or killed that it was their fault for doing something dumb or stupid. And while those aged 55+ believed they had and would continue learning from their mistakes, an inspector acknowledged that it was very hard to do so when that farmer was dead.

Inspectors saw younger farmers incorporating health and safety as part of their business, that between the ages of 25-40 farmers still had a long working life ahead of them so were more accepting of making changes on farm. Those under the age of 40 were considered more risk averse, and interestingly an inspector noted a much higher standard of "housekeeping", tidier workplaces and less hoarding of old machinery in younger farmers and their businesses.

Inspectors supported WorkSafe's approach with its Young Farmer of the Year sponsorship and felt that engagement with children and those in the early stages of their careers would encourage long term generational change and leadership.

"The thing I like about us supporting Young Farmer of the Year, is that these are people who are clearly really passionate about the farming industry, they are still learning but they understand that if you want to be a top farmer in this country, amongst the best, then you need to know your stuff when it comes to health and safety and you need to live it. From my mind, that is just gold for us to be in because they will take that knowledge with them."

WORKSAFE INSPECTOR

Generally, the inspectors surveyed were very positive about children being involved in farm life but stressed that parents and families needed to better assess the risks around the activities being undertaken and vehicles used when children were involved. This was particularly pertinent when looking at children on adult sized quad bikes, or giving them the old ute or tractor to drive, while keeping the newer safer one for themselves out of fear that it might be damaged by a less experienced operator.

"In today's modern age, farming is the only occupation that you can take your child to work. In no other sector of work (forestry, construction or manufacturing) would this practice be considered acceptable. In fact, in most workplaces children under the age of 16 are not allowed."

WORKSAFE INSPECTOR

2.4 The farmer's perspective

A review of survey responses from farmers identified the following trends amongst age groups. There were no responses from those in the 0-9 category, and there was a single response for the 10-19 category that did not provide enough detail to support any conclusions for this research.

For the sake of this exploration of survey responses, I have broken my reporting narrative into younger farmers (20s and 30s), mid-career farmers (40s and 50s) and older farmers (60s and 70+). Where farmers themselves have referred to younger or older farmers it is not possible to ascertain the exact age they have referred to. I have therefore made some assumptions in order to incorporate their comments.

To better understand the farmer survey responses, the respondents were grouped by age category and themes unique to that age group, or referred to by a number of respondents in that age group were drawn from the responses.

AGE	RESPONSE THEMES BY AGE GROUP
20s	<ul style="list-style-type: none"> - Looked holistically at health and safety, including wellbeing and mental health - Willing to learn and improve - Felt that communication is key - Not about compliance - Learning from good leaders and keen to set an example - Developing stockmanship, core skills, learning limits - Workplace culture and environment key
30s	<ul style="list-style-type: none"> - Responsibilities such as children and staff reduce risk taking behaviour - Everyone going home safely a priority - Showing leadership and setting an example/the standard - Culture is king - Health and safety part of the farm business - Awareness of risks increased - Desire to slow down, consider and plan work - Confidence to call out poor practice
40s	<ul style="list-style-type: none"> - Reliance on common sense - Responsibilities such as children and staff reduce risk taking behaviour - Creating simple rules/expectations - Desire to plan work - Realising you aren't indestructible, greater awareness of limits - Consider experience to improve risk assessment - Realise the financial impact of injury
50s	<ul style="list-style-type: none"> - Have improved practice to comply - Everyone going home safely a priority - Health and safety is about a good on-farm culture - Consider both mental and physical health important - Becoming more conservative - Introduction of HSWA considered a turning point
60s	<ul style="list-style-type: none"> - Aware of the physical limitations of aging body - Consider regulations to have prompted their change - Making smaller, dumber mistakes with age - Accidents should not just part of the job anymore - Felt that old cowboy attitude needs to go - Consider health and safety to be about a good on farm culture - Taking their role as leaders and role models seriously
70+	<ul style="list-style-type: none"> - Consider wisdom, hindsight and experience are all great teachers - Concerns at body's ability to react and recover - Increased age means increased caution

TABLE 2:
Key themes in health
and safety discussions
by age group, data
obtained via survey.

Shared themes in responses from farmers of all ages

Farmers across all ages consistently viewed increased age with increased experience and an increased ability to assess and manage risk on farm. This is a result very much at odds with the number of deaths occurring later in farming careers, when farmers have garnered an excess of experience comparative to their younger colleagues.

Farmers across most ages referred to increased responsibility as a determinant of improved health and safety performance. This responsibility could come in a familial form of a spouse and children, or a professional sense as people worked their way up the career ladder into roles with staff, or took on staff for the first time.

Farmers across ages consistently referred to the dangers of working with stock and equipment. Little mention was made of vehicles or vehicle competence despite this being the primary mechanism of fatal harm on farm.

The necessity of role modelling through leadership and example setting was a common theme across age groups. Even those in the younger age groups considered their own need to be leaders in the health and safety space. Those performing well would encourage those younger than them to perform well also. But those setting a poor example, may equally set that poor example for younger staff too.

YOUNGER FARMERS/CULTURE IS KING

When looking at the responses of younger farmers some interesting themes emerged. Younger respondents frequently took a holistic view of health and safety, incorporating the need for greater wellbeing into their answers. They did not see regulation as a cause for compliance, but as something that helped set workplace culture and environment. They stressed the need for this to be lived every day, I consider this to mean practiced and not just talked about as being the right thing to do.

Leadership on farm was considered key and with added responsibility such as having children or staff came an increased need to avoid risk, plan work and ensure everyone made it home safely at the end of the day. Health and safety is deemed part of the farm business by this age group and they feel that poor or reckless practice should be called out.

MID-CAREER FARMERS/CALL FOR COMMON SENSE

Mid-career farmers frequently commented that their practices had improved in line with new legislation and requirements. They talked about the importance of wellbeing and mental health on farm, and the impacts of stress and fatigue. This age group also saw the added responsibility of staff and children reducing risk taking behaviours and highlighted the impact an injury might have on the financial aspect of their farm business. They were also starting to see the limitations imposed by an aging, or perhaps hard worked, body.

The frustrating adage of common sense was frequently mentioned by mid-career farmers. HSWA asks farmers to look beyond the idea of their workers or anyone else on farm having common sense. The problem is that common sense is not really all that common. What makes sense to one person, may not make sense to another and relies on consistency of experience, knowledge and practicality which may not exist in the same manner from person to person.

“Some older generation farmers rely too heavily on their ‘common sense’ which is built on a foundation of experiences good and bad which they cannot assume the generation coming through will have.”

SURVEY RESPONDENT AGED 38

OLDER FARMERS/OLD DOGS CAN LEARN NEW TRICKS

Older farmers discussed the need for good on farm culture and considered their leadership and that of others key to improvements in the health and safety space. They also felt that regulations had prompted a change in their behaviour on farm and had firm views in support of good health and safety.

One respondent observed an increase in “smaller, dumber mistakes” with age. Something that could be considered in line with the higher fatal injury rates in this age group.

Older farmers frequently discussed feeling less nimble and physical limitations kicking in which contributed to more risk averse decision making. The farmers were more aware that their bodies would take longer to repair and that knocks and bruises could take them out of action.

FARMERS ON THEIR PEERS

The perceptions of younger and older farmers by their peers did not necessarily line up with the responses received in the survey.

Older farmers were considered by their peers to struggle with change, be in need of a wakeup call, needing to improve the poor culture on their properties, harder to get on board or change, and needing to stop being so stuck in their ways. Some survey respondents perceived older farmers as perhaps gaining compliance, but not seeing health and safety as a benefit to business and that they were only doing the right thing out of concern for legal consequence.

This is at great contrast to the comments made by older farmers (60s and 70+) in their survey responses. They said themselves that HSWA had prompted their improvement, they were aware of the need for a good farm culture and that everyone going home safely was a priority. Perhaps this discrepancy was due to the limited cohort of farmers surveyed, and there are indeed outliers whose behaviour reflects what was initially described.

In more positive light, older farmers were perceived as wiser, experienced and if good leaders, highly influential.

Younger farmers were perceived as adaptable to change, more willing to learn and upskill, more focussed on health and safety, keen to set an example and more accepting of regulations. On a negative note, younger farmers were also considered more carefree and to consider themselves “bulletproof”.

“As an employer, the worst possible eventuality is to have to ring a person’s parents or partner to inform them that there has been a serious accident. I think about that a lot. What would I say? It’s a powerful incentive to being proactive in terms of accident and injury prevention and taking the responsibility seriously.”

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Understanding the requirements of the Health and Safety at Work Act 2015

Those in their 50s on average rated their understanding of HSWA higher than any other age group. Those in their 20s rated their understanding the lowest.

There is no indicative relationship between considered awareness of HSWA and fatal injury rate. Interestingly, the group that rates their knowledge of the Act highest are those whose careers will most likely becoming established in line with the new regulations. It begs the question of whether WorkSafe needs to do more work here – or if knowledge of the regulations are embedded and not distinctly thought of as legislation.

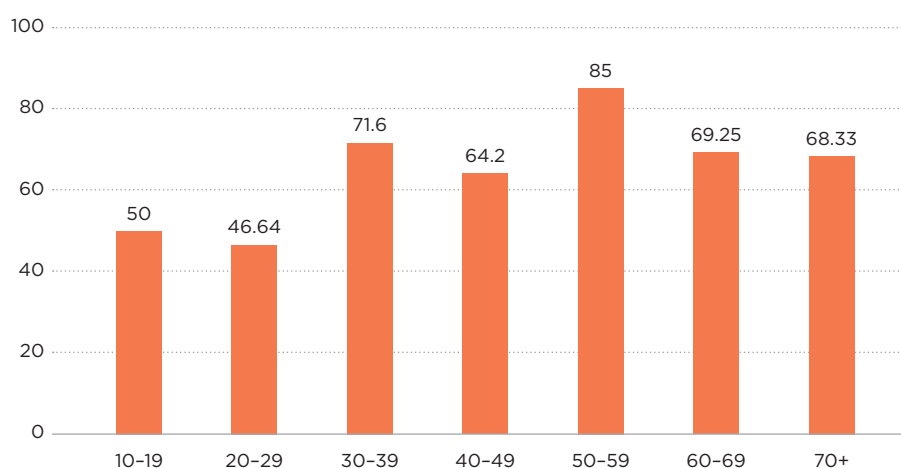


FIGURE 4. Average rating of understanding of HSWA requirements by survey participants, data obtained via survey.

3.0

Discussion

IN THIS SECTION:

- 3.1 A rural oxymoron
- 3.2 Increased responsibilities
- 3.3 You can teach old dogs
new tricks

3.1 A rural oxymoron

The fact that farmers are dying in the highest numbers at the age in which they should be most adept at managing risks appears to me to be something in the way of a rural oxymoron.

The Cambridge Dictionary describes an oxymoron as a phrase or statement that seems to say two opposite things. How can increased age, increased experience and purported increased ability to assess risk all culminate in an increase in fatal injury?

This research suggested that experience was a key contributor to risk awareness and aversion. Respondents felt that with age they learnt new skills, built confidence and competence in tasks and were also taught what not to do through past experiences, frights and uncomfortable moments on farm.

Taking into account previous literature and survey responses I have identified four possible contributing factors. These are only indicative, but I think warrant further discovery.

Slower cognition and decision making ability

Does a farmer's ability to accurately assess risk slow as they age? When they find themselves in danger is the brain's ability to react too slow in the older farmer?

Physical limitations

Can the body not react quickly enough when presented with danger? Can an older farmer not move quickly enough to escape danger, or physically manoeuvre a vehicle from a precarious situation?

Overestimating ability

With increased years of experience, does a farmer overestimate their ability to assess risk, manoeuvre vehicles and complete tasks?

Pending mortality

Does proximity to death actually increase risk-taking behaviours? If one's responsibilities have decreased (eg. grown up children), does this relax a farmers need to ensure they are safe?

If we use the example of a quad bike or tractor, by the time a farmer is reaching the age of 60 or 70+ his experience on the machine and potentially the land should be at its peak. Yet they still find themselves suffering the highest amount of fatal harm at this stage in their careers.

3.2 Increased responsibilities

One theme that was consistently reported across age groups was that with increased responsibility comes a keenness to improve health and safety, more accurately assess risk and avoid dangerous situations.

That increased responsibility took different shapes for different respondents. Some mentioned having a spouse or partner to consider, children who depend on them, the lives of staff members under their direction or the financial responsibility of being in business as responsibility that served as prompts for improved health and safety.

Interestingly, the 30s age group, when farmers would likely be increasing their responsibility in the above areas, is an age group that reports a low amount of fatal harm. This consciousness of responsibility may have a positive correlation with decreased harm. But this would require further exploration.

Synonymous with increased responsibility comes other aspects positively associated with improved health and safety performance and culture on farm. With increased

responsibility comes a need for leadership, educating and upskilling of staff members, inherent care for staff members and others on farm and leading by example.

Respondents observed that if older farmers displayed poor health and safety behaviour, then the younger would likely follow. The same could be considered for the younger following good practice as well. This aligns with the theme of responsibility, and it is clear that farmers in positions of responsibility need to demonstrate exemplary behaviour, put effective systems in place and ensure that staff feel valued.

3.3 You can teach old dogs new tricks

Older farmers while ranking highest in fatal harm, did share some really positive health and safety attributes when discussing their approach and attitude on farm.

Many farmers indicated that the introduction of HSWA had been a key contributor to their improved behaviour. Others felt that the culture in New Zealand at large had changed and was no longer accepting of injury and death as just part of the business.

This is therefore indicative that the increase in fatal injury in older farmer age groups is not down to a disinterest in good health and safety, but other factors as highlighted in my section about the rural oxymoron.

The farmer narrative on WorkSafe and HSWA has shifted since Cam Brown's research in 2015 and Bronwyn Neals's 2016 report. There were no striking concerns from any age group around why health and safety was important. There was the odd comment discussing the frustrations of bureaucracy and regulation, but the why of health and safety is now embedded across age groups. And that is to get everyone on farm home healthy and safe at the end of the day.

Messages rolled out by WorkSafe and HSWA also appear to be having an impact with some farmers talking about the need to focus on the big risks on farm, the increased need to look at health, creating a positive culture on farm and the need to get everyone home safely at the end of the day.

4.0

Conclusions

In conclusion, this research did reveal some interesting interactions between age and health and safety behaviours on farm.

Firstly, that despite the increase in experience that comes with age, farmers aged in their 60s and over the age of 70 die in the highest numbers on farm. This is at odds with the perception that with more experience comes better risk assessment and improved health and safety.

Secondly, older farmers while considered by their peers to be difficult can actually be willing to adjust their practice and work hard to encourage a positive health and safety culture on farm with the priority of getting everyone home healthy and safe at the end of the day.

And thirdly, building health and safety knowledge and capability in younger farmers will hold them in good stead for their farming careers. Notions of leadership and care for staff members, coupled with increasing responsibility from various avenues will encourage a more astute farmer when it comes to keeping themselves and others on farm safe.

Understanding why older farmers die in such high numbers remains largely unknown but the ideas of slower cognition, physical limitations, overestimation of ability or pending mortality (coupled with decreased responsibility) may be correlated.

5.0 Recommendations

In order to improve health and safety outcomes on New Zealand farms I make the following recommendations:

- Continue and/or implement programmes of work that engage with those in their youth or early career years to create sustained generational change.
- WorkSafe and industry groups should utilise the theme of responsibility in working to engage farmers across all age groups with health and safety messages.
- Create case studies on mid-career farmers to help better understand why they are represented in lower fatality and injury numbers and share findings and approaches with wider industry.
- Press release aimed at creating awareness of the four proposed contributing factors to older farmer fatality rates distributed to rural print media.
- Utilise the suggested contributing factors to the high rates of fatal injury in older farmers as the basis for intervention design by WorkSafe and industry groups.
- WorkSafe, rural media and industry groups need to better highlight vehicles as key contributors of harm on farm. Knowledge of risk and/or concern in this area was consistently lacking.
- Repeat the data led elements of this research with injury data to compare and contrast focus areas.
- WorkSafe and industry groups should collaborate on a campaign that focusses on safely incorporating children in farm activities and encourages better risk assessment and decision making by parents.
- Side-by-side accidents need to be differentiated from 4-wheel motorbike by ACC and WorkSafe. It paints an inaccurate picture of fatalities involving an increasingly used vehicle with significantly more safety features than a quad bike such as structural roll over protection and fitted seatbelts.

Appendices

IN THIS SECTION:

Appendix 1: Farmer survey introduction and questions

Appendix 2: WorkSafe inspector introduction and questionnaire

Appendix 3: References

Appendix 1: Farmer survey introduction and questions

Below is an outline of the survey introduction, disclaimer and questions that were presented to farmers to complete.

I am currently completing the Kellogg Rural Leadership programme. As part of the programme, I am completing a study and report into the relationship between worker age and influence in health and safety behaviours on farm.

I am keen to explore with you, as a farmer, your views of health and safety on New Zealand farms.

Please follow your way through the below survey.

Remember to consider aspects of health in your answers, as well as safety.

By completing this survey, you accept that I may use identifying features such as age, region and farm type in the context of my report. Your name or business name will not be used unless you are contacted for express permission.

If you have any questions or want to discuss this further then feel free to call me on 027 306 0603 or email: nicolaruthbarton@gmail.com

Thank you for taking the time to help out.

1. Type of farm
2. Personal details
3. How would you rate your awareness of the requirements of the Health and Safety at Work Act 2015?
4. What does good health and safety look like to you?
5. How would you describe your personal approach to health and safety?
6. Have you had any incidents or near miss incidents on farm that you would like to share? If so, at what ages?
7. Has your approach to health and safety changed with age?
8. Do you think age has a role to play in how willing we are to adjust to healthier and safer behaviours on farm? If so, how?
9. How often do you experience an 'uncomfortable moment' in your work – where you feel there might be the chance of an incident or injury?

Appendix 2: WorkSafe inspector introduction and questionnaire

Below is an outline of the introduction, disclaimer and questions that were presented to WorkSafe inspectors to complete.

As you might already be aware, I am currently completing the Kellogg Rural Leadership programme.

As part of the programme, I am completing a study and report into the relationship between age and influence in on farm health and safety.

I will be reviewing current WorkSafe data to identify the age groups most impacted by fatalities, and also looking at how people of different age groups are being fatally injured on farm.

I am keen to explore with you, as an inspector, your experience of different age groups on farm during assessment visits or investigations.

Please note that your answers should reflect your experience with the agricultural sector, not other sectors.

You can fill this in yourself. Or I am happy to run you through the questionnaire over the phone if that is easier for you.

You will not be named in the report. You may be identified as inspector A-H though.

I may also seek to clarify your response with your permission to be included in my report.

Following the accepted submission of my report. Any identifying features related to your responses will be removed and the information will simply be held as Inspector A-H.

Please let me know if you have any questions. And feel free to contact me to arrange a suitable time for an interview – or I will contact you.

1. Tell me about your job as an inspector with WorkSafe New Zealand?
2. What impact has the age of a PCBU had on your engagement with them?
3. Do you have any comment on age's relationship to knowledge of WorkSafe and/or the Health and Safety at Work Act 2015?
4. Do you have any age related observations you would like to share?
5. Is there anything that alarms you about a certain age group?
6. Do you have any comments about the incidence of children being harmed on farms?
7. What age group do you see as being the most easily influenced to take on board health and safety messages?
8. Is there anything else you would like to share?

Appendix 3: References

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Disclaimer and limitations

It is important to note that I sit on both sides of the rural regulatory fence. I am employed by WorkSafe New Zealand but also have rural allegiances through my upbringing on a Wairarapa sheep and beef farm, an extensive involvement in New Zealand Young Farmers and a social group that is dominated by farmers both here and abroad. I have both a professional and personal interest in this topic and ultimately would like to play my part in reducing the heartbreak that accompanies every on-farm fatality in New Zealand, young or old.

The report does not take into account the incidence of work-related health issues such as cancers and stress in agriculture. One person dies in an acute accident for every 15 who die of work-related health issues in New Zealand.

It may also not take into account the death of individuals on-farm when work was not taking place such as during recreational activities or when families or workers live on farm and are fatally injured outside of work occurring.

The farmer survey was distributed via my personal networks, my parents' networks, the Baker and Associates Ag Letter and New Zealand Young Farmers. The farmers approached are generally proactive and learned in nature and may not entirely represent the breadth of New Zealand's farming community. However, they can provide indicative insights into age and influence in health and safety.

This work is not exhaustive and there are many questions on this topic yet to be answered, some of which will be discussed at the end of this report.

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