

**Stakeholders, sector dynamics, intra-sector  
collaborations, and emergent issues for injury  
and disease prevention in the agricultural  
sector**

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Occupational Health in Agriculture Team  
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## **Executive Summary**

This report presents the findings of face to face in-depth interviews with stakeholders in the agricultural sector and explores their perceptions and understandings of:

- the sector
- risks and hazards faced by agricultural workers
- the effectiveness of current interventions
- stakeholder perceptions of barriers and critical factors relating to implementation of interventions in agriculture
- current intra-sector initiatives

For the purposes of this report the agricultural sector is defined as: governmental, non-governmental, industry and educational organisations that have an explicit interest and involvement in agricultural production; farmers (owners, farm managers, and or decision makers on properties); farm workers and family members working and living on farms throughout New Zealand.

Face-to-face in-depth interviews were conducted with 20 experts and a further three experts by telephone from key organizations within the agricultural sector (23 experts) from October 2007 to March 2008. The purpose of these interviews was to survey their perceptions, understandings and knowledge of key issues currently facing the agricultural sector. Specifically, the participants were asked to reflect on exposure to risks and hazards for agricultural workers, the efficacy of current interventions, and their perceptions of barriers and critical factors relating to the implementation of these and other interventions (see Appendix A). The key organizations included: Accident Compensation Corporation, Department of Labour, Rural Women, Federated Farmers, Agricultural Health and Safety Council, Meat and Wool, Dairy Insight, FarmSafe™, Agricultural ITO, Ministry of Agriculture and Forestry, and the Amalgamated Workers Union. Unfortunately representatives from two organisations were not included: Young Farmers and Telford Polytechnic, this was due to unexpected changes to the interviewing timetable which made connection with these two organisations impossible within the research time frame.

In addition, interviews were conducted on 25 farms, in the regions of Southland, Otago, Canterbury, the Wairarapa and Waikato from April to July 2008. Participants included farmers, farmer workers and family members (30 participants). These interviews were follow-up interviews, where the participants had participated in the national survey and volunteered to participate in a follow-up in-depth face-to-face interview. The final selection of participants from those who volunteered was done on the basis of region, production type and representativeness of production type for the region. The interviews were conducted from April to June 2008. The purpose of these interviews was to explore more fully issues that the farmers, farm workers and family members wanted to discuss

in relation to occupational health, but also to explore their perceptions of barriers to effective interventions that would prevent and or reduce occupational injury and disease in agriculture (Appendix B).

**Key findings from interviews with government, non-government and industry organisations:**

- There are many people and organisations addressing injury and disease prevention. However, there is no long term prevention strategy for injury and disease that specifically addresses the agricultural sector. Having a strategy would facilitate a more refined focus on the problems in this sector and would also facilitate more effective co-ordination and collaboration amongst stakeholders.
- The dominant idea amongst stakeholders that the farming community is “different” is a culturally patterned response to the agricultural sector. As too are understandings that farms are autonomous units. The dominant stereotype of the “farmer” is a masculine stereotype which informs discussion about the farming community. Additionally stereotypical understandings of what constitutes rural and urban and how they differ also informs understandings of the agricultural sector. This is problematic.
- Rural and urban stereotypes inform the relationships between stakeholders in this sector; in terms of how they perceive each other, and how they assume “the other” perceives them. And arguably notions of “remoteness” have become in a sense a culturally patterned response to the rural community and one that patterns responses from those in rural communities. They are not just considered physically remote (from an urban perspective), but socially (in terms of institutional reach) and set apart as culturally “remote” because of their proximity to and relation with nature.
- It is important to be explicit about these stereo-types because as with all stereotypes they are at times used as a proxy or substitute for empirically established, or documented social actualities; and belie the considerable diversity that exists within the “farming community” in New Zealand. They can and do distort or exaggerate commonalities within the farming community; exaggerate the differences that exist between rural and urban New Zealanders and potentially inhibit a critical understanding of the nature of the “farming community” and how fatal and non-fatal injury and disease rates might be effectively reduced in this community. It is particularly important that preventive promotional materials do not reproduce such stereotypes if the objective is to target all at risk on rural properties.
- Using the “farmer” stereotype and/or the “rural” stereotype is not a socially neutral practice, it is about power and it is about staking a claim, over ownership

of, and a closer proximity to a social territory. Demonstrating that you identify with these stereotypes, or are a member of the community that these stereotypes claim to represent invariably involves invoking a contrast to those who cannot and do not identify with these stereotypes. This has implications with respect to inter-organisational relationships within this sector, especially when public servants are held to be distant from this stereotype and where a lack of identification is considered a disqualification from participating in decisions that affect this sector. The perpetuation of these stereotypes by some stakeholders is divisive and is a barrier to collaborative engagement in this sector.

- While all of the stakeholders are involved in initiatives addressing occupational ill-health in the sector there is a tendency for initiatives to be *ad-hoc* and for there to be a lack of co-ordination and coherence, and in some instances where there are some questions around the efficacy of various interventions an unwillingness to accept that there are problems.
- There is common recognition of the need for an agreed upon strategy, that is informed by research. In the absence of this there will continue to be coordination issues, a lack of coherence, issues surrounding the efficacy of specific interventions, duplication of effort and a concentration of effort at the macro level (with little or no involvement at meso and micro levels).
- While intra-sector collaboration exists, effective sector intervention is at times undermined by: internal and inter-organisation politics; lack of resourcing in some areas; problems with how resources are allocated; understaffing at an operational level; and institutional restructuring and its attendant issues for example; loss of staff, uncertainty for staff, loss of institutional knowledge, gaps in delivery; and shifts in priorities that effectively undermine long term planning.
- Some organisations in the sector have limited ability to engage at the level of locality and regions. There is also a lack of skilled personnel to engage in the localities. There are a limited number of personnel available to enforce health and safety requirements and those currently employed in the inspectorate have responsibility for a number of sectors.
- To date the approach to addressing occupational injury and disease in this sector has been a ‘top down’ approach (with the exception of FarmSafe™ which once operating engaged people from rural communities to run courses) – there is a recognized need amongst those in the sector that all stakeholders need to work together. At times the relationship between the state and the agricultural sector has been strained.
- Little is known about the capacity of the rural sector to address injury and disease prevention. There is some evidence that capacity was undermined during economic restructuring of the rural sector in the 1980s and 1990s. And some

evidence from NGOs that capacity is uneven across regions. Some organizations are better placed than others to interact at this level.

- Farm consolidation and changes in labour force composition are significant issues for the sector and have implications for both injury and disease. Farms are larger, involve the management of greater numbers of stock, involve a larger number of employees and or fewer employees (depending on land use); under a range of contract circumstances; and involve a greater number of vehicles and machines over larger territories. How risk is managed on these properties or the nature of employment experiences for workers on these properties remains largely unknown. Addressing human capability for stakeholders in response to these changes is a significant issue.
- Women are often posited as the agents of change (but caution is necessary here as rural research demonstrates that rural women are still under-represented on committees and boards in rural areas – and have limited decision making power in this respect).
- Some in the sector noted an absence of leadership in rural New Zealand and that this would impede efforts to encourage participation in prevention at the community level.

#### **Key findings from interviews with farmers, farm workers and family members:**

- There was an evident stoicism toward ill-health and/or injury; this was the case for both the men and the women. However, amongst the men there was a dominant tendency to understate injury or harm and to dismiss any preoccupation with health as somehow “unhealthy” or as a sign of a “flawed” or “weak” character. This did not mean that they were unconcerned, but rather there was cultural tendency to downplay health or health issues in their lives.
- In connection to this evident stoicism was a vocational identification to the work they do; most could not imagine not farming, it was not just a job. The implications here are that they would often keep on working with an injury (such as a back condition) as doing the work was more important (not just economically), but also in terms of their identity and integral to this was an underlying belief that ‘the health problem’ would right itself if they just kept on going.
- There were also evident differences in the definition of what constituted serious injury. That is, different from that held by researchers and or government agencies. In the main, amongst these participants, a serious injury was one that killed you or seriously disabled – where the disability would ensure you were unable to work again – for example, if a head injury, then it was serious if you, in



- Having close calls, near misses, or scares brought about changes in behaviour, or what is called a “respect” for the risks of using certain machines or working with animals, of working at heights. Experiencing a near fatality changed behaviour. Knowing of someone close who had died in a farm related incident also had some impact on behaviour. Having a member of the family die from a work related farm injury changed their lives.
- Working alone was a significant factor for all the men, not having somebody else to look out for things that might happen. The lack of surveillance that working with others provides and the inability to rely on somebody if something happens are key features of working on these farms. However, in some instances, serious injury did occur when they were working as part of a team – or “gang” and where something was done that the team member did not anticipate. Surveillance is not non-existent on these properties either, while generally they are not being directly observed, family members, spouses and children often fulfil the observer function for the men and women working on these farms. This function is achieved by using cell-phones and or radios and this technology offers a form of surveillance. Knowing where they are, how long they will be, what they are doing and responding when they deviate from all of the aforementioned are common practices of those living and working on these farms.
- Working with machines is central to a farming way of life. All of the men had machinery related injuries at one time or another, all thought that it was necessary to “respect machines” and the risks which they presented to their operators. All thought that technological advances meant that machines today were far more reliable and safe than those in the past (e.g. tractors with cabs, less noisy, four wheel drive, ROPS) and most of the men demonstrated considerable faith in their machines, if not always their ability to master them. Machinery related injury was embarrassing for many of these men, this embarrassment points to the importance of mastering machines and it’s relation to masculine identity. It also means that acquiring knowledge about these machines can be a shaming experience, as too is not controlling the machine and being injured as a consequence.
- Focusing on the ‘positive’ aspects of farming was important for all of the participants and this also means not focussing on injury and disease. Prevention of injury and disease demands focussing on it, as this is not considered a positive experience many do not want to focus on either injury or disease. This is also in part connected to an evident fatalism amongst the participants- “When your times up, it’s up”; “there is no point in worrying about it because it will happen anyway”. This finding is consistent with local and international research which

demonstrates that rural men are generally not proactive in terms of preventive health care, screening or otherwise; and this lack of pro-activity has been implicated in ill-health, for example in rates of cardiovascular disease (Beaglehole 1990, Frazer 2006) and with respect to mental health issues and intentional fatal injury (suicide rates) (Booth et 2000). Rural women are also less likely to undergo screening, in part due to access, but also in part because it is not a “positive” experience and not prioritised (Frazer 2006).

- Many said they were too tired at the end of a working day to read about injury and disease or to go onto the internet to learn about it either. When they opened the paper they wanted to know about local and international news, not health matters. This presents some real challenges for the sector in terms of disseminating information.
- The lack of fit between the governmental, research, and farming community definition of risk is in part about resistance, and exercising power (on all parts). Nonetheless, the definition of serious injury amongst this group is a lay epidemiology and it makes sense not only to them but also in relation to the context within which they work. To up play every ailment or injury and to take time off to recover is not an economically viable thing to do - when you are often reliant on a very small labour pool (if on a family farm) and it is simply not possible on economically marginal properties.
- Shifts and changes in labour arrangements, in particular contracting out work has ensured that the farms in this study are no longer as “autonomous” as they once were, indeed many people come and go from the property at any given time. The workforce is not then concentrated in terms of residence either. With contractors living elsewhere and often engaged in “risky” tasks, there has been what might be called a “risk transfer”. As many participants observed contracting out has meant that many of the risks they once faced are no longer their risks. And while contractors might be at risk it is generally thought that they are better prepared for it – in terms of safety gear and up-to-date equipment. Contracting out is of course only possible for those on economically viable properties. Those in more marginal circumstances cannot pay for additional labour and often work long hours, work alone out of necessity and are arguably more at risk of serious injury. The cultural pattern of not thinking about risk of injury or disease, would in these circumstances offer a degree of psychological protection, but they are nonetheless much more vulnerable to injury. Economic circumstances undeniably shape the level of protection one can afford not only in terms of technological interventions but also in terms of being able to have adequate labour and assistance.
- None of the participants were on amalgamated properties and/or managing on behalf of companies or corporations. We know very little about the labour arrangements on these “super” farms, other than the observations made by these participants that they often employ migrant labour (temporary, casual and

permanent) and that many of these migrants have no experience of industrialised agriculture.

- Labour issues on these farms included a shortage of skilled labour, an awareness of how at risk new people with no farming experience are to injury and also the risks of employing some young people local to the area who lack motivation and or the necessary skills.
- Most do not want to read about injury and disease statistics in their sector. This is consistent with the argument that what motivates people to change their behaviour is not some abstract risk (even if real to some) e.g. The fatality rate for male agricultural workers was 21.2/100 000 in the period 1984-1994 (Horsburgh 2001)); but rather the *real* risk of injury and disease is the risk it might pose to their plans and dreams (White 1999, Trostle 2005).
- There appears to be a gendered difference in how risk is perceived – this emerged not only in the interviews, and particularly when spouses were present, but is also evident in the statistics. There is no other New Zealand research that addresses the gendered nature of injury or disease with respect to agriculture. However, research in the United States suggests it is not just gendered but often shaped by ethnicity as well. This study found that “white” males consistently perceive the risks of potentially hazardous activities as lower than both “white” females and “non-whites”, of both sexes (Slovic, 1997: 73 in Trostle 2005). What this suggests is that social and economic status is a shaper/determinant of perceptions of risk. The international and local literature does show that male farmer/operators are at greater risk of injury, both fatal and non-fatal (Feyer 2001; Franklin 2001; McCurdy and Carroll 2000).
- There is a need to know more about the changing nature of labour and labour arrangements on farms. There was some evidence in this study that being a farm worker can mean that you are vulnerable to increased risk if your employer is unwilling to provide protective equipment. And in once instance, an employer was constantly having to reinforce wearing safety gear and thought that state enforcement would assist her role as a responsible employer.
- Perceptions of government workers were considerably more empathetic amongst those in the farming community, than what the experiences of many government employees indicated. However, amongst most there was a resistance to the idea of enforcement or “regulation”: for most this resistance was attributed to pragmatic reasons (an inability to imagine how it would work); and for a minority, because it was seen as unnecessary state interference.

## **Introduction**

Occupational injury and disease in the agricultural sector is a serious public health issue. Agricultural workers sustain high levels of injury, are exposed to a range of occupationally related diseases and experience disproportionately high levels of occupationally related morbidity (Cryer 1989; Marshall et al 1996; Feyer et al 1999, Horsburgh 2001; Feyer et al 2001). Current injury and disease rates in this sector are of social concern not only because of the actual and future lost productivity occurring within a sector responsible for contributing over 60% of our export earnings, but also because it impacts on the lives and employment experiences of approximately 9% of the total New Zealand labour force (Statistics New Zealand; Pearson et al 2004). In addition, while injury and disease contribute to lost productivity, workers in the agricultural sector also contribute disproportionately to accident compensation claims in New Zealand. Whilst the fatal injury rates in agriculture are high, it has been estimated that the number of deaths resulting from occupational disease for all occupational groups (not specifically for agriculture) are somewhere in the vicinity of five to possibly ten times the number of deaths resulting from workplace fatal injuries. This estimate suggests that there are between 320 and 800 deaths from occupational illness in New Zealand a year (Pearce et al 2003).

Research in this field has demonstrated that the primary agents of fatal and serious injury experienced by agricultural workers are: injury by machinery, ATVs, tractors (particularly roll-overs) injury by animals, other vehicle injuries, and bystander injuries – (particularly of children); injury resulting from lifting and straining and slips, trips and falls (Lilley 2004; Morgaine et al, 2006; Horsburgh 2001; Feyer et al 2001, Fathallah 2008). Exposure to noise and hearing loss, amongst predominantly middle aged and older men (McBride 2003, Thorne et al 2008) and occupational overuse syndrome and or musculoskeletal conditions which often require ongoing treatment, are significant ill-health outcomes amongst those working in agriculture (Milosavljevic 2005, Fathallah 2008). Research on rural health suggests that rural people (including those working in agriculture) have greater risks of certain cancers, cardiovascular disease and health conditions associated with obesity (Smith et al 2008; Pearce et al 2007; Beaglehole 1990; Westbrooke et al 2001).

Yet despite intervention and prevention efforts on the part of a number of organizations within this sector, injury and disease amongst agricultural workers and their families remains a significant public health issue. Historically intervention initiatives have often been piecemeal, not always evidence based, and there has been little if no evaluation of the efficacy of these interventions (Morgaine et al 1996, Cryer 2008) While evidence based interventions are more likely to be effective it is necessary to have a strong and even evidence base. Unfortunately the evidence base for agriculture is uneven and to

date does not provide an adequate platform from which to develop such interventions.<sup>1</sup> To date, research has tended to focus on specific geographic regions (for instance, Firth et al 2006; Firth et al 2001; Firth et al 2007, McBride 2003), and/or provides analyses of routine data sets (for instance: Cryer 1989; Marshall et al 1996; Feyer et al 1999, Horsburgh 2001; Feyer et al 2001; t'Mannetje 2007; Reif et al 1989; Dockerty et al 1991).

This research is valuable and provides essential insights into what is happening in particular regions and particular worksites at particular points in time. Additionally, the numerous analyses of routine data provide an insight into the patterns and prevalence of injury and disease during certain periods for the agricultural population. However there is a lack of research that provides a national profile of both injury and disease in agriculture, the research body reflects a tendency in the research community to address these issues in one decade and not in the next (this may well be a reflection of the availability of funding and or shifting funding priorities) but there are evident breaks in the research record. Thus we tend to have up to ten year gaps before more research is conducted in the area. As a consequence it is difficult to ascertain patterns over time by drawing on a consistently generated body of research. Furthermore there is a dearth of research that addresses socio-cultural, economic, political and historical factors which arguably shape or determine injury and disease outcomes for those working in the agricultural sector. While it is clear that effective prevention hinges on at times a combination of behavioural change, changes in technology (and attendant behavioural change) and knowledge of “real”<sup>2</sup> risk. A comprehensive understanding of individual behaviour or the contexts within which it is shaped and embedded, at the level of community, environment and society, in relation to agricultural employment and or work in New Zealand, is largely underdeveloped.

The social science record is uneven with respect to employment and more generally the agricultural labour market. Equally it is uneven with respect to issues relating to this for farmers, farm workers and their families. What does exist was in the main generated in the late 1980s and 1990s, during a period of significant economic change and restructuring in the agricultural sector (Pawson & LeHeron; Fairweather 1988; Houghton 1986; Houghton et al 1987; Lovelock 1993; Connolly 1990; Edwards 1991; Scott 1995; Rivers 1992) There are also a number of reports that have been generated within and for government agencies, making up a body of grey literature that is very useful, but not particularly accessible (Basham 2006, Department of Labour 2007). The social science record is a little more consistent when addressing issues connected to rurality, gender and rurality, and change in rural communities (up until the late 1990s, see for example, Leipins 1998, 2000; Lidgard et al 2000; Joseph et al 2001; Joseph et al 2003). However, only a very few researchers have addressed health in agriculture (see for instance Panelli et al 2006; Pearce J et al 2006).

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<sup>1</sup> The current project: Effective Occupational Health Interventions in Agriculture will address some of this unevenness.

<sup>2</sup> “Real risk” is risk that has meaning to the person – not an abstract concept – but rather how their life dreams and plans might be undermined by injury or disease (Slovic 1997).

More generally research in the field of injury and disease is limited contextually; often concerned with only one social site (the farm), and heavily reliant on self reported behaviour ‘on the farm’; where on-site observational data is limited or non-existent in most studies. Arguably, this is in part because much of the research in this field is under-theorised, is predominantly quantitative and relies on either postal or telephone surveying as the main methods of data collection. The relative absence of qualitative research that explores injury and disease through fieldwork methodologies – that enable data generation on whether people do what they say they do; and to observe what practices stand as barriers to effective interventions is significantly absent. In part the reason there is a dearth of such research is fiscal, fieldwork can be expensive and logistically more complex; but perhaps too there is a resistance to methodologies that have been erroneously assumed to lack “objectivity” or “scientific validity” in a field that has been predominantly quantitative. The narrowness of the “social site” focus has meant that there has been considerable focus on “what is happening on the farm”, but little focus on what happens at the gate, or on farm roads, or in the local community and or market and how these interactions shape and or determine health behaviours and outcomes on the farm. There is an absence of multilevel research, which explores micro, meso and macro level factors and interactions which underpin the determinants of injury and disease in the agricultural sector.

As a consequence, we have an inadequate understanding of the key historical, ideological, social, cultural, political and economic contexts within which injury and disease in the agricultural sector takes place and these gaps seriously undermine the ability to develop effective interventions in the agricultural sector.

This component of the Occupational Health in Agriculture Study attempts to address the absence of knowledge in the research record of the relationship between various stakeholders in this sector, the nature and scope of current and proposed intra-sector collaborations, inhibitors and facilitators of inter-organisational collaboration and what the implications are for developing and implementing effective interventions in agriculture.

Finally and arguably compounding the situation outlined above, to-date there has been an absence of an integrated long term research strategy for occupational health in agriculture within the occupational health research community in New Zealand.

### **The agricultural population:**

Addressing injury and disease in this sector is complex for a number of reasons. We are dealing with a working population that is dispersed geographically, comprising approximately 66 000 commercial farms (Statistics New Zealand 2007). In the last decade there has been evidence of farm consolidation, a decrease in the number of farms and increases in the size of holdings (McLeod & Moller 2006). There has also been some evidence of encroachment on productive land with an increase in the number of lifestyle lots, with limited if no productive output, particularly around urban centres

(McLeod & Moller 2006). There have been changes in production in the last decade, with an increase in dairying production, declining participation in wool production, particularly in the last five years, and increased conversion of pastoral land into viticulture and horticultural production in some regions (Statistics New Zealand 2007). All of these shifts have implications for the labour force and in turn implications with respect to risks of injury facing this labour force (McLeod & Moller 2006; Lovelock and Leopold 2009).

The agricultural labour force comprises approximately 103 000 (FTE) workers (including owners, farm workers' (seasonal and temporary) and family members, part time, full time and casual) (Statistics New Zealand 2007). Hidden from these statistics is the unpaid labour provided by family members, including children. Most farm operators (owners, decision makers, managers) are New Zealanders of European origin, have relatively high education levels, and on average earn above average incomes (Statistics New Zealand 2007). Most farm workers are also New Zealanders of European origin, have comparatively lower levels of education, and earn average to below average incomes (Statistics New Zealand 2007). Historically Maori had high participation rates in agriculture, but with urban migration their rate of participation has declined dramatically (Statistics New Zealand 2007). In addition there are approximately 5000 temporary migrant workers working in agriculture, who are part of the Recognised Seasonal Employer policy/scheme introduced in 2007 to address labour shortages in this sector. These workers come from the Pacific Islands (Lovelock and Leopold 2009). Until the introduction of this scheme it has been estimated that 80% of those engaged in crop/horticulture in this sector sought and employed undocumented (illegal) migrants as they faced serious labour shortages in their localities (Lovelock & Leopold 2009). There are also other temporary migrant workers, working in agriculture, however, for these workers it is not the express purpose of their working visas (they are predominantly from Germany and the United Kingdom) (Department of Labour 2008)<sup>3</sup>. All are remunerated in accordance with national labour legislation and are entitled to medical care and compensation for occupational injury through the state accident compensation scheme (Lovelock & Leopold 2009).

The agricultural workforce experiences high levels of mortality and morbidity; in the decade 1985-94 the annual work related fatal injury rate in agricultural occupations in New Zealand was 21/100 000, four times the all-industry average (Cryer 1989; Marshall et al 1996; Feyer et al 1999, Horsburgh 2001; Feyer et al 2001) and in the last decade injury rates have remained constant in this sector. The primary agents for fatal and non-fatal injury on farms in New Zealand are agricultural machinery, specifically, tractors, all-terrain vehicles and animals, in particular horse, sheep and cattle. For those working in the agricultural sector there are exposures and risks associated with a number of diseases. While rural New Zealanders have overall a lower risk of cancer, they are at greater risk from certain cancers, for example, cervical, prostate, melanoma, Non-Hodgkin's Lymphoma, lip and eye cancers (Smith et al 2008; Pearce et al 2007; Pearce et al 1992; Kogenvinas et al 1997; Pearce 1986; Reif et al 1989; Pearce et al 2007b; Dockerty et al 1991; Bethwaite et al 2001; t'Mannetje et al 2007). Rural New Zealanders

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<sup>3</sup> See Department of Labour website: [www.dol.govt.nz](http://www.dol.govt.nz)

have greater risk of cardiovascular disease (Beaglehole 1990; Westbrooke et al 2001), suicide (Pearce J. Et al 2007; Judd 2006), obesity (Smith et al 2008) and motor vehicle crashes on public roads (Dovey et al 2003; Harre et al 1996).

The agricultural workforce are more likely to have difficulty accessing ill-health care, treatment of injury and preventive care because of distance and availability (Panelli et al 2006, Frazer 2007). The rural population of New Zealand and the agricultural labour force is aging and rural New Zealand has been experiencing depopulation for a number of decades (Joseph et al 2001; Alpass & Mortimer 2007; Davey & Cronwall 2003). Rural communities in New Zealand are diverse and there are health disparities within and between rural communities throughout New Zealand. Additionally the sector is experiencing labour shortages and attracting workers into rural New Zealand is at times difficult in some areas, where many communities have lost amenities, for example, banks, petrol stations, schools, food outlets, dentists, doctors and other health care professionals and services over the last twenty years (Panelli et al 2006).

### **Research objectives:**

This report is a subcomponent of the *Effective Occupational Health Interventions in Agriculture: Key characteristics of their development and implementation in New Zealand* research programme. As such it seeks to contribute to the attainment of a number of outcomes and specific objectives.

### **Outcomes:**

- Firstly, it seeks to address the uneven nature of our knowledge of the levels of exposure and risk for workers and their families on New Zealand farms and the barriers and critical factors that impede or facilitate effective intervention in this sector. An understanding of intra-sector relationships and responsibilities and the structural realities of the sector will assist in understanding key barriers and critical factors that may facilitate or impede effective intervention.
- Contributing to an up-to-date knowledge base from which the Accident Compensation Corporation, the Department of Labour and other stakeholders will be able to introduce or modify targeted interventions that will reduce the rates of injury and disease for agricultural workers and their families.

The target population for the quantitative component of this research includes those directly employed in agricultural production, ancillary workers who directly support agricultural production, and their partners and families. The target population for the qualitative component of this research includes the aforementioned and governmental, non-governmental, industry and educational organisations involved in the agricultural sector.

This research addresses the following objectives:



- To identify the barriers to implementation and adoption of the key interventions
- To identify the critical factors which need to be considered when designing and implementing interventions.

The qualitative research design involved:

- Face to face interviews with stakeholders to explore understandings of the sector, understandings of exposure to risks and hazards, efficacy of current interventions and perceptions of barriers and critical factors relating to the implementation of these and other interventions

The research design for the programme *Effective Occupational Health Interventions in Agriculture: Key characteristics of their development and implementation in New Zealand* comprised two literature reviews. (1) A literature review of recent research on risks and exposures to injury and disease in agriculture in North America, Europe and Australasia. And (2) a literature review of recent literature on the effectiveness of various interventions in agriculture, locally and internationally. In addition a national survey of the target population (farmers/owner/decision makers; farm workers and their families) was conducted between August 2007 and August 2008, which addressed the nature of injury and disease amongst this population, exposures to risks and hazards, current interventions that are in place, barriers and critical factors relating to the implementation of these and other interventions. Face to face interviews with stakeholders were conducted to explore understandings of the sector, understandings of exposure to risks and hazards, efficacy of current of interventions and perceptions of barriers and critical factors relating to the implementation of these and other interventions. Face to face interviews were conducted on 25 farms throughout New Zealand and with farmers, farm workers and their families were conducted to more fully explore barriers and critical factors relating to interventions.

For further information on the *Effective Occupational Health Interventions in Agriculture: Key characteristics of their development and implementation in New Zealand study* and associated publications see <http://www.otago.ac.nz/irpu>.

## **Methodology**

This project involved conducting semi-structured in-depth interviews with 23 experts from key organisations (governmental, non-governmental, educational, industry) within the agricultural sector. Twenty of these interviews were conducted face-to-face, and 3 were conducted by telephone. Interviews with the 23 experts were conducted by the principal researcher (Lovelock) over the period October 2007-March 2008. A copy of the interview schedule is presented in Appendix A. A stakeholder meeting was held in April 2008 and the discussion that took place between stakeholders at this meeting informs a component of this report and some of the research findings.

In addition to these interviews, semi-structured in-depth face to face interviews were conducted on 25 farms throughout New Zealand, including the following provinces: Southland, Otago, Canterbury, Wairarapa, and the Waikato. In addition one interview was conducted by telephone (Central Otago). The total of number of interviews with those who work on farms was 30, all conducted by the principal researcher (Lovelock). The production on these farms included: sheep, beef, dairying, crops, horticulture, and mixes of the aforementioned. These interviews involved farmers, farm workers and family members and were conducted between April-July 2008. A copy of the interview schedule is presented in Appendix B, and an executive summary of the main results is presented at the end of Section B.

Whilst all interviews were directed by the aforementioned schedules, an attempt was made for these interviews to be dialogic (conversational) which enabled some divergence from the original schedule and allowed participants to focus on what was important to them and to explore issues more fully (Denzin and Lincoln 2005). Further to this, conversational or dialogic interviewing generates valuable insights into divergent viewpoints of the group being interviewed and importantly allows immediate follow-up on issues raised by participants, that might not been identified through other methods (Denzin & Lincoln 2005; Fontana & Frey 2005; Atkinson & Lamont 2005). Interviews were in the main digitally recorded and transcribed; some interviews were not digitally recorded and in these instances detailed notes were taken by the researcher (Lovelock). Interviews varied in length from 15 minutes (in one instance) to 2 and half hours. The notes and transcriptions were then read to identify common and emergent themes and these were then analysed interpretively (Perakyla 2005; Atkinson & Lamont 2005).

This qualitative research compliments the quantitative research design which involved a national computer assisted telephone survey of farmers, farm workers and their families randomly selected from the Accident Compensation Data base and the Agri-Quality data base. This report should be read in conjunction with the report on the findings of this national survey: *Effective Occupational Health Interventions in Agriculture. Report of a survey of risk factors and exposures on farms.* (Report No.3); and also in conjunction with the two international literature reviews conducted as part of this project: *Effective Occupational Health Interventions in Agriculture. Risk factors for Occupational Injury and Disease in Agriculture in North America, Europe and Australasia: A Review of the Literature* (Report No.1) and *Effective Occupational Health Interventions in Agriculture. An international review of primary interventions designed to reduce injury and disease in agriculture* (Report No.2).

## **Key Stakeholders**

This research draws on interviews with experts from key organisations within the agricultural sector. The organizations represented here are not the only organizations in this sector that have an interest in or involvement with injury and disease in agriculture.

They are however, currently, those organizations that have explicitly embraced addressing injury and disease in this sector as either part of the legislative mandate, organizational goal or brief with respect to welfare in the agricultural sector, and or, as part of developing, expanding and protecting commercial interests in this significant area of primary production in New Zealand.

The occupational health and safety sector is diverse with a number of agencies working in the field all variously addressing the prevention of work related harm. Collaboration and co-operation in this sector occurs through a number of mechanisms; including: political, primarily through the Injury Prevention Ministerial Committee; through formal relationships and Memorandums of Understanding (MOU's) between government agencies and interagency groups; informal relationships involving a number of non-governmental organizations and government and industry partnerships often focussing on the promotion of health and safety and educational initiatives). Amongst industry groups there are a range of informal relationships between Crown entities and their social partners. For the agricultural sector all of these forms of relationships are evident and include the following range of organisations: Accident Compensation Corporation, Department of Labour, New Zealand Police, Agricultural Health and Safety Council, Rural Women, Young Farmers, Federated Farmers, Farm Forestry, FarmSafe™, Central Amalgamated Union, Deer Industry, Meat and Wool, Dairy Insight, Amalgamated Workers Union, Industry Training Organisations, and various Polytechnics and Universities for both collaboration on research and training issues in the sector.

## **Participating Stakeholders**

### **Accident Compensation Corporation**

The Accident Compensation Corporation was established in 1974, whilst historically it assumed another name, its function since inception has by and large remained the same.<sup>4</sup> The ACC is a crown entity charged with administering New Zealand's accident compensation scheme. The Injury Prevention, Rehabilitation, and Compensation Act 2001, is the principal Act under which the ACC operates and provides the mandate for ACC to undertake activities aimed at preventing and reducing injury at work. Under this scheme all New Zealand citizens, resident and temporary visitors to New Zealand are provided with personal injury cover. It is not possible to sue for personal injury, although it is possible to sue for exemplary damages. The scheme provides a twenty-four hour, no fault, personal, injury cover.

Injury prevention is a primary focus of the ACC where the aim is to reduce the incidence of injury, costs associated with injury and to work toward developing a 'safety culture' amongst New Zealanders. Safety in the agricultural sector is a major focus for the Accident Compensation Corporation as injury and disease in this sector contribute

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<sup>4</sup> Previously named Accident Rehabilitation and Compensation Insurance Corporation

disproportionately to accident compensation claims, totally some \$40 million a year in compensation payments.<sup>5</sup>

The ACC is responsible for:

- Developing programmes to prevent injury, and working with a range of organizations and community groups to this end
- Buying and enabling access to health and disability support services to treat and care for injured people and achieve positive outcomes for them
- Buying and enabling access to social and vocational rehabilitation services to support injured people and achieve positive outcomes for them
- Providing financial assistance for injured workers during their rehabilitation
- Maintaining stable levies by efficiently managing Scheme costs, and maximizing the value of the ACC investment fund

(ACC Strategic Plan, 2007- 2012:6)

Working to reduce injuries and occupational diseases is Strategic Priority 5 in the Strategic Plan and encompasses the following objectives:

- Reduce the incidence, severity and cost of injuries
- Raise awareness of the causes of occupational diseases and ACC's role in providing cover so that their incidence and impact is reduced
- Work with other agencies and partners to create a safer community

(ACC Strategic Plan, 2007-2012:17)

In order to realize these objectives the ACC undertakes to:

- Enhance New Zealand's performance in injury prevention through leadership of the NZ Injury Prevention Strategy, focusing on child safety, injury at home and falls
- Lead initiatives targeted at areas of greatest need, which are based on sound research and show a tangible return on investment – initiatives will include strategies which address injuries with serious consequences
- Work to improve access to the Scheme for people with work-related gradual process, disease or infection
- Work with the Department of Labour to minimize future claims for work-related noise induced hearing loss and other gradual process diseases by ensuring people are not exposed to harmful agents
- Ensure, in partnership with other agencies, that a quality-based and robust injury prevention information collection and co-ordination system is established.

(ACC Strategic Plan, 2007-2012:17)

The ACC also has a role in education offering a range of resources for the agricultural sector. Including for example booklets and guides for emergencies and incident

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<sup>5</sup> <http://www.acc.co.nz>

investigation, how to manage hazards, improving workplace safety and health, farm safety, managing and riding ATV's (paper and DVD form), preventing manual handling injuries, preventing slips, trips and falls, managing fatigue, handling cattle, and designing better (safer) cattle yards. They also offer a range of other resources that address specific occupations within the agricultural sector, for example, shearing, and specific issues such as respiratory protection and hearing protection guides.<sup>6</sup>

The ACC employs 2300 staff and has 48 operational units. Nationwide there is a 31 branch office network and four contact centres. As a Crown entity it is governed by a Board of Members who are responsible to the Minister for ACC. The management of ACC is overseen by a Chief Executive and an Executive Team comprising 9 Executive leaders. The ACC has an organizational affiliation with the Heads of Workers Compensation Authorities (HWCA) which comprises the Chief Executives of the peak bodies responsible for regulating workers compensation in Australia and New Zealand.<sup>7</sup>

ACC is funded through the collection of premiums which are paid by all New Zealanders. Premium levels are set by the government and are assigned to one of seven accounts. The seven accounts are: 1) employers account; 2) earners account; 3) self-employed work account; 4) non-earners account; 5) motor vehicle account; 6) medical misadventure account; 7) residual claims account. The ACC is represented on the Agricultural Health and Safety Council.

## **The Department of Labour**

The Labour Department began its work in 1891, then known as the Bureau of Industries and employing just one man. A name change to the Labour Department occurred in 1892 and the first Minister of Labour was appointed. The Labour Department Act was passed in 1893 outlining the scope and functions of the Department, which were largely restricted to administering labour laws, collecting and publishing rates of wages and knowledge of occupations with a view to improving relations between employers and workers. The Act was re-enacted in 1908 and the scope and function of the Department changed considerably as a consequence. In 1954 a new Act: The Labour Department Act was passed and for the first time health and safety were explicitly addressed in legislation (Department of Labour 1966).

The Department is required to administer a large number of Acts of which the following are relevant to the agricultural sector and have organisational implications: The Health and Safety in Employment Act; The Hazardous Substances and New Organisms Act 1996; and the Injury Prevention, Rehabilitation and Compensation Act 2001 (all of which are supported by other Acts which impact on health and safety in workplaces). The Department of Labour takes leadership with respect to compliance and enforcement, operational responsibility for compliance to the Health and Safety in Employment Act and the Hazardous Substances and New Organisms Act. Other state sector operational/compliance involvement includes working with Maritime New Zealand, the

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<sup>6</sup> <http://www.acc.co.nz/injury-prevention/rural-safety/WCM000987>

<sup>7</sup> <http://www.acc.govt.nz>

Civil Aviation Authority, the Commercial Vehicle Investigation Unit and the Ministry of Health

The Department of Labour administers and enforces the Health and Safety in Employment Act which was first passed in 1992 and then substantially amended in 2002. The object of this Act is to promote the prevention of harm to all people at work, and others in, or in the vicinity of, places of work.<sup>8</sup> The Act applies to all New Zealand workplaces. Under this legislation employers, the self employed, employees, principals and others have various obligations to manage and control hazards. The Act stresses the importance of the systematic management of health and safety at work. It requires the maintenance of safe working environments, the implementation of “sound” practice. It is recognized that successful health and safety management relies on good faith co-operation in the workplace and input from those doing the work.

### **Occupational Safety and Health/Department of Labour**

The Department of Labour provides information and guidance on health and safety in the workplace and oversees the Workplace Health and Safety Strategy (June 2005). The Workplace Health and Safety Strategy (2005), outlines a strategy for the realization of safer and healthier workplaces by 2015.<sup>9</sup> Developing preventative workplace culture is one of the nine objectives of this strategy; and where the other objectives address various interventions including: effective regulation, providing appropriate incentives, engaging in social dialogue, better design and technology and basing interventions on sound research and evidence.

Additionally the Department of Labour has operational responsibilities that include inspecting workplaces for compliance with health and safety regulations and investigating workplace accidents and in such a role provides a range of resources. The health and safety workforce has regional presence and the agricultural workforce is just one of many being addressed by the inspectors/health professionals at the regional level. The Department of Labour is represented on the Agricultural Health and Safety Council.

### **Ministry of Agriculture and Forestry (MAF)**

The current Ministry of Agriculture and Forestry (MAF) was originally known as the Department of Agriculture and was established in 1892 as a result of an amalgamation of the Stock and Agriculture Branches of the Department of Crown Lands. Initially its primary role was to provide farmers with expert advice in order to improve production (MAF 2008). There have since this time been a number of significant restructurings of the organisation which have led to changes in its role and functions. The core function of the Ministry of Agriculture and Forestry is policy and regulation (addressed through a number of subsections including: MAF policy, MAF Regulatory Authority, the Corporate Group and Corporate Affairs). Service delivery was conducted by MAF Quality Management (MQM). In 1995, MAF Quality Management was internally separated from

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<sup>8</sup> [www.osh.dol.govt.nz](http://www.osh.dol.govt.nz)

<sup>9</sup> <http://www.dol.govt.nz>

the rest of the Ministry pending a review of its functions. Farm advice services became the responsibility of Agriculture New Zealand, which was initially state-owned but later privatised (MAF 2008).

In the same restructuring (1995), the responsibility for fisheries was relinquished to the new Ministry of Fisheries. In 1998 the Ministry of Agriculture and the Ministry of Forestry merged and became the Ministry of Agriculture and Forestry. In the same year and as a consequence of three strategic reviews (1996, 1997 and 1998) MAF Quality Management was replaced by two State Owned Enterprises (SOEs): Asure New Zealand Limited and AgriQuality New Zealand. Service delivery was then separated formally from the core Government tasks of policy advice and regulatory standards after it was concluded that operations within the former MAF Quality Management section were potentially commercially viable (MAF 2008). In July 1999, the Regulatory Authority was divided into MAF Food Assurance Authority and MAF Biosecurity.

From 1987 to 2004 MAF has undergone a series of restructurings that have changed their role and function and functional relations with other organisations. In 2002 the MAF Food Assurance Authority and parts of Ministry of Health combined to become the New Zealand Food Safety Authority, a semi-autonomous business within MAF. In 2004 the MAF Biosecurity Authority became Biosecurity New Zealand.

MAF is mandated to:

- further the economic success of the sectors;
  - promote sustainable development and environmental integrity;
  - protect consumers and enhance New Zealand's position as a trusted supplier of food;
  - protect our valued biodiversity;
  - promote the humane and responsible use of animals; and
  - uphold the interests of New Zealand's rural communities
- (MAF, 2008).

MAF is represented on the Agricultural Health and Safety Council.

## **Industry**

### **Dairy Insight (at the time of interviews the company was undergoing a merger)**

Historically, industry activities were undertaken on behalf of dairy farmers by the New Zealand Dairy Board which was disestablished in 2001 when Fonterra was created. Dairy Insight and Dexcel were created to continue the industry good activities. Under this arrangement Dairy Insight administered the levy all dairy farmers paid and focussed on research and development and education. Dexcel was a lead provider of research, development and on-farm education to the dairy industry. The New Zealand Dairy Board provided funding for the purchasing of land and livestock at Newstead and to take ownership of the Dairy Research Corporation (DRC) and AgResearch. After the

deregulation of the dairy industry dairy farmers voted in favour of a levy paid via Dairy Insight.

At the time of this research Dairy Insight was in the process of merging with Dexcel and DairyNZ was officially formed as a result of this merger in November 2007. The aim of this organisation is to secure and enhance profitability, sustainability and competitiveness of New Zealand dairy farming. DairyNZ is an independent, farmer controlled organisation. It represents all New Zealand dairy farmers and markets their products internationally through collecting a dairy-farmer levy. The organisation also invests in research and development projects that contribute to practical on-farm tools and in an extensive pest control programme to reduce bovine Tb.

The organisation has a governing Board of seven members, of whom five are farmer-elected and two are independent, professional directors. The organisation has a head office in Hamilton (Newstead). There is a regional presence in Westland, Southland, Canterbury, Taranaki, Bay of Plenty and Northland and a small office in Wellington. (DairyNZ 2008). Their role is to invest, monitor, develop, engage and influence (advocate) and protect the industry by working in the interests of all dairy farmers.

### **Meat and Wool New Zealand™**

Meat and Wool New Zealand™ is responsible for the red meat and wool industry, investing levies taken from farmers to promote the industry. Meat and Wool New Zealand™ invest in research and development so farmers can be kept informed. They market meat and wool domestically and internationally and provide technical advice to assist users of wool for carpets and other products. Another role is to develop trade policy to improve international access for red meat and wool products. They also provide economic analysis to inform decision making and address human capacity for the sector with a specific focus on skills and education (human capability) so the industry can continue to attract skilled workers. They serve as an advocate on public policy and assist with crisis management and recovery through a crisis fund.

In the years 2006/07 Meat and Wool New Zealand's™ budget was \$40.3 million of which 33% was invested in research and development, 26% in market development and approximately 7% in trade policy. Thirty four percent (34%) funded activities in the regions, economic analysis, skills and education, administration, beef, sheep and goat councils and the Monitor Farm programme. Meat and Wool New Zealand™ is a company incorporated under the Companies Act 1993 (Meat and Wool New Zealand™ 2008). Six of the directors are elected by farmers, who represent three electorates in the North Island and three in the South Island. Directors serve a term of three years. Two directors are elected to represent the interests of meat processors and exporters (Meat and Wool New Zealand™ 2008).



## **Federated Farmers**

Federated Farmers began in 1902 when the New Zealand Farmers' Union was constituted nationally. In 1945 the New Zealand Farmers Union then amalgamated with the Sheep-owners' Federation and the new entity took on the name Federated Farmers. Federated Farmers is a rural advocacy organisation that relies on a paying membership to finance their advocacy role. It has a network of organisations spanning 24 provinces and representatives addressing seven industry groups: representing the meat and fibre, dairy, goats, rural butchers, beekeepers, high country, and grain and seed farmers.

The Federation is governed by a National Council. The National Board meets six times a year and comprises a president, vice-president, two board members and three industry group chairs. The National Council includes the National Board and representatives from each of the 24 provinces and meets twice a year. The Head Office of Federated Farmers is in Wellington and here policy development, advocacy and advisory services are based. Administration is based in Hamilton, and the federation has offices in Auckland, Tauranga, New Plymouth, Palmerston North, Nelson, Christchurch, Ashburton, Timaru, Dunedin and Invercargill.

Some of the central issues they currently address are: the levies charged by Accident Compensation Corporation and advancing their preferred model for accident insurance, which is a commercially competitive model. They have an active role in injury prevention participating in the Agricultural Health and Safety Council; at the time of this research the Chair of the Council was also the President of the Federated Farmers and they support and participate in the FarmSafe™ programme (Federated Farmers 2008).

## **Rural Women New Zealand (RWNZ)**

Rural Women was formerly known as Women's Division of Federated Farmers, and began as an organisation comprised of rural women speaking for rural women in 1925. The initial impetus behind this organisation was the desire on the part of rural women to achieve improved social and economic conditions for rural people and rural communities.

Rural Women is a voluntary association which works with and for rural New Zealand families and communities. They aim to develop rural communities by valuing rural uniqueness, understanding the needs of rural communities and working with agencies and RWNZ members to develop a strong rural network. They work toward building relationships with government and non-governmental organisations and serve as a resource partner. They communicate with their membership sharing information that is relevant to the rural sector (they have an e-newsletter that provides regular updates about a range of issues in the agricultural sector and a website). They also provide funding for

individuals through a bursary scheme, and for rural communities through sponsorship and regional funding programmes (Rural Women 2008).<sup>10</sup>

The membership includes all ages and women throughout New Zealand. The organisation has a head office in Wellington and there is a national network of groups who have regional representatives representing these groups at the national level. The organisation serves as an advocate and frequently makes submissions on issues affecting rural people. They also have an educational role and facilitate training days and seminars for rural communities and groups. Rural women also provide other services including: Access Home Health, a homecare service. Rural women have been involved in homecare since 1927, when they began a rural homecare service which became the forerunner of the District Nursing Service (Rural Women 2008)<sup>11</sup>. This service is available in both rural and urban areas, and aims to support quality of life and independent living at home. Access Home Health is the homecare service of Rural Women New Zealand.

Members of Rural Women are involved in the various Rural Support Trusts nationally which mobilise in times of distress, primarily environmentally provoked with serious social and economic implications. Rural Women facilitate communication about the Rural Support Trusts and their role via their website and newsletter. Rural women and their membership have played a pivotal role in addressing social community need in environmental emergencies in rural New Zealand. As a voluntary organisation with a national network they have the capacity (albeit constrained economically) to address issues throughout rural New Zealand. Rural Women are represented on the Agricultural Health and Safety Council.

### **Rural Support Trusts**

Rural Support Trusts provide assistance to rural communities in times of hardship, and historically this has included responding during adverse events such as droughts, floods and heavy snow fall. They are variously supported by Local Authorities and Local Government and have also more recently received funding from the Ministry of Agriculture and Forestry to assist in the development of a nation-wide network of Rural Support Trusts. To date there are Trusts in the South Island in Southland, Otago, South Canterbury, Mid Canterbury, North Canterbury, the West Coast, in Marlborough/Nelson/Tasman areas. In the North Island there are Trusts in the Wairarapa; Taranaki; Tararua; and Manawatu/Rangitikei/Wanganui areas; in the Hawkes Bay and Gisborne and Bay of Plenty areas. There are also Trusts in the Waikato/Hauraki/Coromandel. A Trust is currently being formed in Northland.

Rural Support Trusts provide services such as:

- coordinating an initial response to an adverse event;
- helping farmers decide on business options;
- acting as advocates for financial assistance; and

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<sup>10</sup> <http://www.ruralwomen.com>, accessed May 2008.

<sup>11</sup> <http://www.ruralwomen.com>, accessed May 2008.

- Providing stress management services or making referrals if appropriate.

The Ministry of Agriculture and Fisheries are currently assisting in building the capability of existing Trusts; and forming new Trusts in regions where there are currently no Trusts (Source: Rural Women 2008). However it should be noted, that the first Trusts were community based initiatives, funded by community and Trust members and were very much a grassroots reaction to experiences of a lack of co-ordination and provision of services in emergencies in rural New Zealand.

### **Agriculture Industry Training Organisation (Agriculture ITO)**

Agriculture ITO is an industry training organisation focussing on knowledge and skills needed in the agricultural sector. They offer qualifications recognised by the New Zealand Qualification Authority (NZQA) addressing skills and knowledge for industry sectors including dairy, sheep and cattle, to rural servicing, wool harvesting and water industry services (AgITO 2008). Their role is to work with employers and others in the industry to manage and promote training opportunities and to work with schools to train students before they enter the industry and to work with industry partners to develop nationally recognised and registered qualifications with NZQA. They offer Modern Apprenticeships, a government sponsored programme that provides support and mentoring to 16 to 21 year olds working in agriculture.

### **Farm safe™**

FarmSafe™ is an educational intervention designed to reduce fatal and non-fatal injury in agriculture. Farmsafe™ is run by a consortium of organisations including Agriculture ITO, Agriculture New Zealand and Telford Rural Polytechnic. Originally an Accident Compensation Corporation (ACC) and Federated Farmers initiative it was designed to address agricultural fatal and non-fatal injury rates through education. Farmsafe™ programmes are provided throughout the country and provide both practical tuition and interactive sessions designed to raise awareness about working safely in agriculture. FarmSafe™ Awareness and FarmSafe™ Plans are one-day workshops that focus on the practical management of workplace safety on rural properties and enable participants to develop a health and safety plan which conforms to legislation and that is effective in reducing the risk of injury. Farmsafe™ skills are a series of interactive workshops that address competence in practical farming and horticulture tasks. Farmsafe™, at the time of this research, was funded primarily by the Accident Compensation Corporation and the Tertiary Education Commission (TEC). FarmSafe™ is represented on the Agricultural Health and Safety Council.

### **The organisations**

All of the organisations outlined above are addressing occupational injury and disease in agriculture in various ways. Most of these organisations are involved in collaborative projects with one another. All of these organisations are represented on the Agricultural Health and Safety Council which has as its primary objective addressing occupational

health and safety in agriculture.

## **Part A: Stakeholder interviews: Government, Non-Government, Educational and Industry organisations:**

Most of the participating representatives of these organisations have employment histories that have intersected in some way with agriculture. Many had long standing employment in an agriculturally related government department or industry. Others had work histories that involved addressing health and safety in other sectors. Of those working in non-governmental organisations and industry many have links to rural communities and or farms and or work histories in the voluntary sector.

The governmental, industry and non-governmental agencies that participated in the face-to-face in-depth interviews were asked to describe the agricultural sector and the key issues currently facing the sector. The agricultural sector (population) for the purposes of this study was defined as comprising: farmers, farm workers and their families, ancillary workers, and industries associated with and dependent on agriculture; non-governmental organisations with an explicit focus on agriculture; educational organisations with an explicit focus on agriculture; and government organisations with a legislative mandate to address issues in agriculture; and those with a mandate to address occupational injury and disease. For the purposes of the following discussion the “farming community” will be used to refer to farmers, farm workers and their families and non-governmental organisations that represent them. While this is problematic, with respect to an implied homogeneity, differences of viewpoint and practice will be identified where necessary. There were a number of common issues and common themes that emerged from the interview transcripts and these are outlined and discussed below.

### **Perceived characteristics of the “farming community”**

#### **They are “different” and or “unique”**

There were common perceptions of the key characteristics of the farming community amongst all participants. Participants variously described those engaged in agriculture as: “conservative”, “independent”, “fiercely independent”, “opposed to any intervention, which they see as interference”, “gung ho”, “unaware of the dangers of their occupation” and conversely “aware their occupation is dangerous” and “macho”.

The farming community was either implicitly or explicitly held to be “different” and or “unique” and or “distinct” from other occupational groups. When asked if they were more unique or different than other self employed people, most insisted that they were, as one participant stated: “they are not the same as other self-employed groups” (Int.3). It was asserted by many that those who farm are “by their nature different” (Int.4). And some noted the importance of working and living on the farm “the thing to remember is work is home and vice-versa” (Int.2). The majority stressed that work for those in this sector was not like other kinds of employment - stressing that farmers had a different relationship with their work than other workers; as one stated “it wasn’t just for the

money, many have a strong [emotional] connection to their land and their animals”(Int.7). While there was some variance in these descriptions amongst participants, specifically non-governmental organisations stressing the “vocational” aspects of farming more than the state sector participants’, all participants described this population using the same adjectives. All of the participants were in agreement that those engaged in farming were “different” and that interactions with them with respect to addressing injury and disease would necessarily also have to be “different” from those with other occupational groups and employment sectors.

In addition, many of the participants noted that differences were also “physical”. That is they stressed the geographically dispersed nature of the farming community and also that farms were discrete autonomous units that are dispersed and at times isolated. As one participant observed:

*Unlike other occupational groups you cannot find them in one place. They are widely dispersed and operating businesses that are self contained autonomous units (DS10003).*

Another:

*It is a more difficult occupational group to work with. They are spread throughout the country, their homes are their workplaces and they are by in large autonomous and self contained units (DS10006).*

We therefore need to ask how dispersed is this community of workers? And: How autonomous are these farm units? While farms are obviously distributed throughout the country, many are very close to urban centres (small and large). Some farms are comparatively isolated (at a greater distance from urban centres). This is of course an urban-centric explanation of the geographic distribution of farms. We could equally say that farmland in New Zealand is occasionally broken by small to medium size urban centres. As we will see in Section B, none of these farmers and their families felt isolated or thought they were physically isolated even in the case of one farm where they were an hour and half away from the nearest town. And in terms of their daily work, they did not operate as autonomous (self-contained) units. We need to be aware of how these perceptions (and or actualities) might impede the development of interventions and the regulation of health and safety in the agricultural sector. For example, what do these perceptions of “remoteness” tell us about culturally patterned responses toward the farming community and what can these cultural responses tell us about patterns of injury and disease and how we respond to them in rural New Zealand? These questions will be addressed throughout the report and in the concluding summary.

### **The self employed and other vocations**

However, despite participants insisting that those that farm differ or are different, it is important to note that many self employed share employment characteristics with those who are farming. And most importantly with respect to this study, the self-employed

more generally have a poor record in terms of occupational health and safety – that is, injury and disease outcomes (Feyer et al 2001). They are often engaged in other “high risk” industries, for example construction, forestry, fishing and or mining. Interestingly workers in these sectors have also been described as “fiercely independent, “macho”, “gung-ho”, and “unaware of the dangers they face” or at least as “risk takers” (Lovelock 1993; Phillips 1980). And for those outside of these sectors, many self-employed conduct work at home. A time use survey found that forty four percent (44%) of non agricultural employers and 52% of own-account workers conduct some paid work at home; and eighteen percent (18%) of employees conduct work at home, primarily in the evenings and on weekends (Callister & Dixon 2001). Additionally many other occupational groups would claim “they don’t just work for the money” that their work is more than “just work”, that it is a vocation (Turner 2003). Thus, those who farm have commonality with many teachers, nurses, doctors, dancers, and rugby players to name only a few of those that characteristically describe their work as “more than work” or “not just a job”. This is not to deny there are differences, but it is as important to acknowledge where sameness exists with other occupational groups in New Zealand society. And finally, arguably, farmers (owner operators) and ancillary workers share with other self employed people a similar structural relationship with the state; as do their employees with other employees. While some participants denied that there was much common ground between farmers and the self employed. Others’ explained why some think that farmers’ are different from other workers:

*Many seem to think that they are different from everyone else, and therefore they cannot be treated in the same way. This is in part because they think that because they are the “back bone” of the country, that they are not like other workers or employers and that they can do what they like on their own properties. They can be very defensive and difficult to work with, any engagement can be taken as an attempt to control them or interfere in their lives (DS10004).*

*There is a very persuasive idea that it is not ok for “you” [public servant] to come **down or out here** and tell us what to do on our farms. And obviously there are issues in terms of getting there and or even addressing safety on farms (DS10009).*

Perhaps the biggest difference that was not, however, articulated by most participants and if articulated not reflected on is that the majority of the self-employed, in New Zealand, are based in urban centres (and are predominantly service providers or at least the majority are not engaged in primary production). They are not typically ‘rural’. While this is obvious, it is important. It is by in large why farmers or those in farming are perceived to be ‘different’ from the other self employed. The exaggeration of difference evident in many of these interviews when participants contrast farming as an occupation with other occupations; is arguably underpinned by the more persuasive idea that the “rural” and the “urban” are different, and or opposites, not just separated in space, but also separated in terms of their very “nature” or relation to “nature” (Franklin 2002) Rural and urban stereotypes inform the relationships between the stakeholders in this sector; in terms of how they perceive each other, and how they assume “the other”

perceives them. And arguably notions of “remoteness” have become in a sense a culturally patterned response to the rural community and one that patterns responses from those in rural communities. They are not just considered physically remote (from an urban perspective), but socially (in terms of institutional reach) and set apart as culturally “remote” because of their proximity to and relation with nature.

*They are blunt, at times obnoxious, independent, macho and very resistant to people suggesting that they might have to change (DS100010).*

*What people don't seem to understand, and this goes for public servants too, is that farming people are different. You know, we are out there in those communities and it is vital that you have people that understand them and the way they are, it's no good having townies go out there and tell them what they need to do. One of the reasons our organisation works is because they know we are one of them. These blokes just want proof, practical proof that something will work (DS100015).*

Invariably when participants talked about the farming community, and or farmers, they were talking about men (there were exceptions to this, but not many). The claim to difference is gendered. This is important, because so too are the injury and disease rates in this sector. The rural stereo-type is also a masculine stereotype, based on a particular masculine “type” born of a number of historical processes and events since the time of colonial settlement (Phillips 1980). In fact the “farming community” in New Zealand is considerably more heterogeneous in terms of the men that inhabit it and their attitudes and practices than any stereotype suggests; and this will be discussed in the second section of this report, but it is worth noting at this point that there are men in this sector who deeply resent being portrayed by the aforementioned dominant stereotype, whilst there are also men who actively embrace it. What this masculine stereotype excludes or disguises is the productive and economically significant (remunerated or not) contributions of women on farms throughout New Zealand (Rivers 1992, Scott et al 2000; Leipins 1998) and the large number of children who both live and work on these farms and who experience high rates of both fatal and non-fatal injury (Lilley 2004). Additionally, this stereotype is also arguably that of a “farmer” (farm owner) rather than of a farm worker.

For the purposes of this research it is important to be explicit about these stereo-types because as with all stereotypes they are at times used as a proxy or substitute for empirically established or documented social actualities; and belie the considerable diversity that exists within the “farming community” in New Zealand. They can and do distort or exaggerate commonalities within the farming community; exaggerate the differences that exist between rural and urban New Zealanders and potentially inhibit a critical understanding of the nature of the “farming community” and how fatal and non-fatal injury and disease rates might be effectively reduced in this community. It is particularly important that preventive promotional materials do not reproduce such stereotypes if the objective is to target all at risk on rural properties.



## **Are those who farm as different as they are perceived to be?**

The point is not to deny that this is how those who farm are perceived by many, nor to deny that individuals exist in rural New Zealand who fit these characterisations. Rather, we need to ask a number of questions. For example: Whose interests are served by such stereotypes? Whose interests are served by perpetuating this stereotype? And: How might the uncritical use of such stereotypes negatively impact on the design of interventions that address injury and disease in the agricultural sector? It was evident that the stereotype and being able to replicate it and or being able to demonstrate an active identification with this 'type' was also about making a claim to having a closer relationship with the farming community for some stakeholders. Further, in all instances this also implied a greater claim (or right) to being able to work with them, represent them, advocate for them and or "educate" them. The use of this stereotype (as is the case with many) is about power and it is about staking a claim or a territory; however, in doing so it invariably involves contrasting those who can identify with this stereotype with those that cannot. This has implications with respect to inter-organisational relationships, especially when public servants are held to be distant from this stereotype - and therefore less qualified to participate in decisions affecting this sector. The perpetuation of this stereotype by some stakeholders is divisive and is a barrier to collaborative engagement in this sector.

## **Points of difference**

There are a number of features of the working environment on farms, while obvious, are important to consider with respect to how these workplaces differ from others. Farmers, farm workers and family members work on the land and often over a physically large territory. They work outdoors for much of the year. They also work in sheds, outhouses or barns with a wide range of hand tools. They often work alone. The farm may be close to a town, or it may be very isolated (accessible by dirt or gravel road and some distance from the nearest amenities). They work with animals and or crops and their work is organised seasonally. They work with a wide range of machinery and in particular are exposed to a wide range of mobile machinery. Unlike a factory worker, their work is not subject to constant surveillance. Unfinished work in some respects might not be noticed for some time (if an employee, by the "farmer) or by the "farmer" if he or she has other things to do, or if it "slipped my mind" or if "there is no time" (see interviews in Section 2). They, unlike the afore-mentioned self-employed, do not (even if there are workers on a property) typically work like a "gang" (although "gangs" may come to work on the property e.g. shearing gangs and or those who are contracted to "harvest"). The last two characteristics are significant (1) challenges to direct surveillance (2) do not work in or like a "gang". We will return to these two characteristics later in this section as arguably they have the greatest implications with respect to thinking about intervention in this sector. Interestingly, many participants did not identify these workplace characteristics as primary, rather they more commonly asserted that the biggest obstacle to working

effectively with interventions in this sector hinged on the “personality trait” or “social trait” differences that made negotiating behavioural change in this sector difficult.

*The trouble is that they are exposed to so many risks, so many machines, and so many unforeseen things - like stock jumping or crushing in the yards. And, then, in different seasons; [they have] different pressures to get jobs done in time. It's a matter of getting them to think about these risks differently (DS100013).*

*We are about changing hearts and minds, getting them to think about what they are doing and to change the way they think about health and safety. It is only then that we will have a change. We need to educate, educate and raise their consciousness (DS100016).*

It was acknowledged by some that the farming community are exposed to a wide range of risks, unlike other occupations. And managing these risks and reducing injury and disease outcomes involves not only addressing the specific mechanisms of injury, but attitudes in relation to these mechanisms, and it is the latter that is considered problematic by many of the participants. The dominant idea put forward by participants is that you must change how people think, before you can change how they behave; referred to by some participants as “changing hearts and minds”. This is problematic. It assumes that the idea is first and then the behaviour follows. Yet, it is possible to have behavioural change –or behaviours - without any “psychological or intellectual” commitment. And as we will see later in the report, education on injury and disease has made some “think” about it, but they admit they go back to the way they have always done it. Amongst a population of “practical people”, the doing should be the focus. The idea that how we think must come first; or the idea that telling people in the hope that they will have a “mind set change”; needs to be critically challenged; as it is evident in this sector that “mind change” or “changed thinking” is not working. Indeed, if the sector continues to rely on education and “changing thinking” as the sole method and panacea for addressing injury and disease it is doubtful whether there will be a reduction in injury and disease outcomes in the agricultural sector. Interventions that address doing, through design changes to both machinery and workspaces will bring about the greatest change in this sector. There needs to be some acceptance from some stakeholders that you do not need to believe in a behaviour or practice in order to be able to do it.<sup>12</sup> Further to this, as we will see, many on farms do not want to “think” about ‘it’ [injury and disease]. One participant stated “*what is needed is a culture change*” (DS100010) – culture change requires more than an ideological shift.

### **Perceptions of how the “farming community” perceives governmental stakeholders**

Additionally, all of the state sector stakeholders made reference to how they thought many in the farming community perceived “the state” and in particular governmental organisations that had legislative responsibilities toward them with respect to occupational health and prevention of occupational injury and disease. Many felt the

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<sup>12</sup> A person can go to church every Sunday and not believe in God. A person can believe in God and never go to church.

perceptions and reactions to governmental agencies and their employees were often negative and at times could be antagonistic. Whilst not all interactions can be characterised in this way and some individuals clearly have good working relationships with the “farming community”, many did think there were general attitudes toward public servants involved in health and safety that were often negative. In summary the following issues were raised by some in the state sector:

- Antagonism toward those who are bureaucrats
- Antagonism toward those who live in cities
- Resistance and distrust of those perceived to be “enforcers” of laws or those that wanted to enforce labour regulations
- A perception that government departments are peopled by people who are ignorant of the “realities” of farming life and engaged in “meaningless” work (often an *a-priori* assumption)
- And, for some participants, these perceptions were reinforced when they had been told, as one participant had, that: “city bureaucrats fail to appreciate the “real” contribution that farming makes to New Zealand society” (Int 5). (A number of participants had been told similar things, but all such comments essentially conveyed the same message).
- And, that many in the farming community think it is only because bureaucrats are ignorant of how different farming is from other occupations that they think they should or can direct what is happening on farms in New Zealand.
- Members of the farming community think the bureaucrats should just focus on occupations other than farming.

One of the biggest barriers to developing effective interventions is the perception that those in farming differ “socially” and/or in terms of “personality traits” or in relation to other workers or that the differences in their workplace present an insurmountable challenge to effective interventions. There is a very real need for all stakeholders to engage with commonalities and sameness, not only within this sector but also in relation to other occupational groups. Without this shift in focus on the part of all stakeholders – state sector, non-governmental, educational, it is doubtful that any targeted intervention will succeed.

All human beings think they are unique, irrespective of what society they live in, what role they have in that society, what they do every-day and what they believe in. If being “unique and different” in farming means accepting one of the highest fatal and non-fatal injury rates out of any occupational group in New Zealand society, then the current definition of “uniqueness and “difference” is not serving this community or New Zealand society particularly well.

Differences do exist, but so too do commonalities. There is a risk that if commonalities are not stressed the “burden” of occupational injury and disease in this sector will be experienced as ‘a criticism’ or being ‘put upon’ by members of the non-farming community. Some of participants noted that many in the farming community do feel ‘put upon’ and that they are not appreciated by the rest of New Zealand society. This was in

relation to the increasing scrutiny with respect to environmental issues. In response to feeling “put upon” these participants said that the farming community tends to resist any changes (irrespective of the issue).

### **Current issues and concerns facing the sector**

Participants identified a number of key issues currently facing the sector including

- Labour issues
- Increased mechanisation and new technologies
- Design issues around interventions
- Rural health generally
- An aging population
- Rural home care
- Rural crime
- Mental Health
- Family violence
- Adequate telecommunications coverage
- Issues connected to “cultural” change in this sector
- Information overload
- A perceived lack of leadership in the rural sector

### **Labour Issues, shortages, changes in labour arrangements**

Labour shortages and related issues in the agricultural sector were raised by a number of participants. While some properties had difficulty recruiting labour locally, others were unable to recruit labour because of poor economic returns, here specifically referring to sheep farmers. In addition there was an understanding that the difficulties recruiting local labour (local to the farm) were linked to increased youth migration for tertiary education in urban centres and the youth not wanting to return to the area; increased concerns on the part of parents about health and safety in agriculture and parents advising against careers in the industry; and or youth deciding not to pursue this career because of the risks. In some instances property owners experience a high turnover of labour and or difficulties recruiting skilled labour and are dependent on workers who lack motivation (or a “work ethic”- see further discussion of this in Section B of this report).

Participants observed other significant changes in the sector in relation to labour, in particular the increase in the use of contract labour. In some instances (in sheep and beef) the increase in the use of contract labour has meant that these workers are now nearly as prevalent or significant as domiciled labour. On some properties there has been a decrease in the use of domiciled labour, especially on economically marginal properties. Increasingly contracted services are being used in the industry, including contracting in for: wool harvesting, forage harvesting, fertiliser application, carting livestock, herd testing and pregnancy testing.

## **Farm consolidation**

In addition and in connection to farm consolidation there are not only fewer farms, but fewer farm owners, more farm managers and greater engagement of employees on these large properties (even if they face difficulty in doing so). This has also had implications socially as one participant describes:

*Amalgamation of farms is having a huge impact in some rural areas. For example, in one area I know of, a retired farmer purchased four of the neighbouring properties, and after amalgamating these properties he appointed a single farm manager and some single farm workers to run the large property. This amalgamation displaced four young families from the district and led to the local school closing. And this is not an isolated example. Ownership is increasingly becoming concentrated in the hands of a few in some areas in New Zealand (DS100023, March 2008).*

Others made the observation that it is increasingly difficult for young people to get into farming because larger farms are prohibitively expensive for most young “farming couples”. In connection to this, (see also Section B) young people who have worked toward purchasing a farm are increasingly having to purchase more marginal land. This land is often more difficult terrain to navigate and according to farmers (Section B) puts these young people at greater risk of machinery related injury.

There has also been a loss of productive farm land to forestry, particularly with economically marginal farms (currently sheep and beef) responding by converting to forestry. In addition to this, sheep and beef properties have also been subject to the encroachment of lifestyle blocks.

For those on economically marginal properties, waiting for returns to improve is very stressful as operating costs continue to increase. In addition some people are farming in recurrent drought conditions and at a time when returns are poor.

## **Collaborations between stakeholders**

There are a wide range of collaborations between stakeholders, some of which have been outlined earlier in this report. In addition to these, there are industry collaborations in the pastoral sector and a number of partnerships that address climate change and sustainability issues facing the sector. There are also collaborations between industry and organisations such as Young Farmers and Rural Women. There are informal and formal links between industry in the pastoral sector and horticulture, particularly cooperative endeavours in relation to attracting, recruiting and training labour. Here too, industry works closely with a range of government departments, and tertiary institutions, including universities and polytechnics. There are a number of consortiums addressing issues such as green house gases. And there is cross-sector engagement between horticulture, dairy, red meat, venison, game producers, particularly with respect to addressing human capabilities and skills shortages. Additionally there are collaborations

involving researchers at various universities and research institutes that involve education and research that assists with improved production.

In a sector as diverse and as dispersed as the agricultural sector, collaborative efforts are one means of addressing limited resources. However, all participants noted that while it can improve the use of resources it should not be seen as a substitute for resourcing. In some areas, for instance in the area of enforcement there is significant understaffing and no amount of intra-sector collaboration will address this shortage.

Collaboration works best as a strategy or at the operational level when there is clarity over roles, responsibilities and objectives, when all are committed and when there is adequate resourcing and clear lines of accountability. Most of the participants would agree with this, but currently there appears to be a need for a “plan” or strategy that all could adhere to that specifically focuses on health and safety in agriculture.

### **Guidelines, operational standards and dissemination**

There are many initiatives being undertaken by the government organisations and non-government organisations, and there is evidence of considerable will and determination on the part of the participants to address injury and disease in the agricultural sector. For example, there are a large number of guidelines, operational standards and best practice materials. There are also visual materials (DVD’s) and a range of field-days that provide information first hand and conduct medical assessments (e.g. audiology testing). In addition there is radio coverage and has been television advertising. In addition to this there are websites providing all of the above information for the farming community online.

However a large amount of information dissemination relies on print media and requires reading. This is problematic for some groups within the farming community where literacy rates are an issue and where amongst some there is an aversion to “reading” and or a feeling that they are being overloaded with information (particularly in print form)(see Section B of the report for further discussion). This is not to suggest that the generation of materials such as those mentioned above is not useful (formal evaluations of some have indicated that they are see Department of Labour 2004) and necessary, or to deny that many of these publications are a response to a statutory requirement that operational guidelines be produced. It is rather to suggest that other avenues of dissemination should probably be explored more fully.

### **Design issues**

Design issues are being addressed in the sector, most commonly involving retrofitting of various devices and machines. However, participants also highlighted that there are many issues connected to design, where designs are inadequate or flawed and or dangerous in the New Zealand setting. Specifically, as one participant noted when referring to tractors, the farming community are “inheriting” design issues with imported machinery that has

been designed to work on different terrain (in Europe or North America) (DSI00020). And this participant also noted that we cannot afford to manufacture our own tractors, which could meet New Zealand terrain requirements. In addition there are a range of commercial issues associated with introducing safety devices and an inability of non-commercial organizations in the sector to endorse safety products.

### **Grey Literature and commissioned research**

The sector has commissioned a wide range of research that has led to the generation of a number of “in house” reports (or grey literature). Much of this literature is very useful and valuable, but it is generally hard to access (unless you are familiar with searching government websites or know what you are looking for) and they are not always noted in the publication sections of the various websites nor known of by other people working within the sector (for example, Adams et al 2002; Department of Labour 2007; Basham et al 2006). Many participants acknowledged this and some suggested a centralised record of these reports would be useful for those working in this area.

### **Existing Strategic Plans, Co-ordination and the need for a strategy**

There are a number of initiatives taking place simultaneously and some participants noted that a number of initiatives come about in a seemingly *ad-hoc* manner and that intra-sector efforts could be more co-ordinated. One reason for the seemingly *ad-hoc* development in this area is the absence of a strategy or plan that all in the sector are working toward and that is specific to agriculture. Given there are a variety of issues at any one time there is need to establish priorities and for stakeholders to agree on these priorities. This would address duplication and ensure a more strategic and coherent approach to occupational health in the sector.

Additionally, while all of the participating organisations have strategic plans, many of these plans address a wide range of issues facing the sector, including sustainability, but interestingly sustaining a healthy and viable labour force is largely overlooked. There is a need to incorporate occupational injury and disease, a significant labour force issue, into these plans and to highlight that injury and disease prevention is about economic viability, profitability, productivity and sustainability; it is not a “health and safety problem” that stands outside any of these issues, it is integral to achieving all of them.

There is a need for an agreed upon strategy, one that is informed by research and that is developed by all stakeholders (on farms, in rural communities, governmental agencies, non-governmental agencies and industry). In the absence of this there will continue to be coordination issues, a lack of coherence, issues surrounding the efficacy of specific interventions, duplication of effort and a concentration of effort at the macro level (with little or no involvement at meso and micro levels).

### **Inhibitors of intra-sector collaboration**

Some participants observed that Intra-sector collaboration is sometimes undermined by internal and inter-organisational politics. Other issues identified included a lack of resourcing in some areas; and if not a lack of resources, then problems with how resources are allocated. At the operational level there is significant understaffing which largely prevents any real engagement happening at the level of locality and undermines the ability to enforce compliance with health and safety legislation. And finally, for the governmental agencies, institutional restructuring (repeated and ongoing and long term) has led to the loss of staff, uncertainty amongst staff, loss of institutional knowledge, gaps in delivery over time and constant shifts in priorities – making planning and the realisation of some planned goals very difficult and or impossible.

### **Ability to engage at the level of locality**

Some organizations in the sector have limited ability to engage at the level of locality and regions. In addition some participants noted that there is also a lack of skilled people available that could engage effectively with farming communities. In addition, there are significant resourcing issues with respect to enforcement of labour legislation on farms where there are only a small number of labour inspectors nationally and where they have multiple sector responsibilities where agriculture is just one of many.

### **Relationships within the sector and rural capacity**

To date the approach toward occupational health and prevention of injury and disease has been a top down approach. There is a recognized need amongst those in the sector that all stakeholders need to work together. And while at times the relationship between the state and the farming community has been strained addressing occupational injury and disease in this sector effectively requires engagement from both mid-level organisations and individuals, along with engagement from all in the farming community.

One participant observed:

*We need people in the rural communities, but of course who would be able to implement or assist at the local level? Rural women? I think women could be the key to this (DS100020)*

And another:

*Well ACC has offices throughout the country, but they may not be the best organisation to address local initiatives. (DS100019)*

And another:

*We definitely need more engagement with rural communities and those on farms; any intervention is not going to work without it (DS100021).*

In relation to the above, little is known about the capacity of the rural sector to address injury and disease prevention. There is evidence that capacity was undermined during economic restructuring of the rural sector in the 1980s and 1990s (Joseph 2001;



Fairweather 1988) and some evidence (largely anecdotal) that capacity is uneven across regions. Some organizations are better placed than others to interact at this level. Women are often posited as the agents of change (but caution is necessary here as rural research demonstrates that rural women are still under-represented on committees and boards in rural areas – and have limited decision making power (Leipins 1998). Additionally, all groups have capacity limits and rural women are already contributing in a significant way in many rural communities throughout New Zealand. There is risk that this capacity might be over exploited. In addition, some in the sector noted an absence of leadership in rural New Zealand and perceived this to be a major barrier facing effective community participation.

## **Summary**

There are many people and organisations addressing injury and disease prevention. However, there is no long term prevention strategy for injury and disease that specifically addresses the agricultural sector. Having a strategy would facilitate a more refined focus on the problems in this sector and would also facilitate more effective co-ordination and collaboration amongst stakeholders.

The dominant idea amongst stakeholders that the farming community is “different” is a culturally patterned response to the agricultural sector. As too are understandings that farms are autonomous units. The dominant stereotype of the “farmer” is a masculine stereotype which informs discussion about the farming community. Additionally, stereotypical understandings of what constitutes rural and urban and how they differ also informs understandings of the agricultural sector. Rural and urban are held to be opposites and the difference pivots on their proximity to nature.

Rural and urban stereotypes inform the relationships between stakeholders in this sector; in terms of how they perceive each other, and how they assume “the other” perceives them. And arguably notions of “remoteness” have become a culturally patterned response toward the rural community. Those who work on farms are not just considered physically remote (from an urban perspective), but socially (in terms of institutional reach) and set apart as culturally “remote” because of their proximity to and relation with nature.

It is important to be explicit about these stereo-types because as with all stereotypes they are at times used as a proxy or substitute for empirically established, or documented social actualities; and they may belie the considerable diversity that exists within the “farming community” in New Zealand. They can and do distort or exaggerate commonalities within the farming community; exaggerate the differences that exist between rural and urban New Zealanders; and potentially inhibit a critical understanding of the nature of the “farming community” and how fatal and non-fatal injury and disease rates might be effectively reduced in this community. It is particularly important that

preventive promotional materials do not reproduce such stereotypes if the objective is to target all at risk on rural properties.

Using the “farmer” stereotype and/or the “rural” stereotype is not a socially neutral practice, it is about power and it is about staking a claim, ownership of, and a greater proximity to a social territory. Demonstrating that you identify with these stereotypes, or are a member of the community that these stereotypes claim to represent invariably involves invoking a contrast to those who cannot and do not identify with these stereotypes. This has implications with respect to inter-organisational relationships within this sector, especially when public servants are held to be distant from this stereotype and where a lack of identification is considered a disqualification from participating in decisions that affect this sector. The perpetuation of these stereotypes by some stakeholders is divisive and is a barrier to collaborative engagement in this sector.

While all of the stakeholders are involved in initiatives addressing occupational ill-health in the sector there is a tendency for initiatives to be *ad-hoc* and for there to be a lack of co-ordination and coherence, and in some instances where there are some questions around the efficacy of various interventions an unwillingness to accept that there are problems.

There is common recognition of the need for an agreed upon strategy, that is informed by research. In the absence of this there will continue to be coordination issues, a lack of coherence, issues surrounding the efficacy of specific interventions, duplication of effort and a concentration of effort at the macro level (with little or no involvement at meso and micro levels).

While Intra-sector collaboration exists, effective sector intervention is at times undermined by: internal and inter-organisation politics; lack of resourcing in some areas; problems with how resources are allocated; understaffing at an operational level; institutional restructuring (loss of staff, uncertainty for staff, loss of institutional knowledge, gaps in delivery; shifts in priorities).

Some organizations in the sector have limited ability to engage at the level of locality and regions. There is also a lack of skilled personnel to engage in the localities. There are a limited number of personnel available to enforce health and safety requirements and those currently employed in the inspectorate have responsibility for a number of sectors.

To date the approach to addressing occupational injury and disease in this sector has been a ‘top down’ approach (with the exception of FarmSafe™ which once operating engaged people to run courses from rural communities) – there is a recognized need amongst those in the sector that all stakeholders need to work together. At times the relationship between the state and the agricultural sector has been strained.

Little is known about the capacity of the rural sector to address injury and disease prevention. There is some evidence that capacity was undermined during economic restructuring of the rural sector in the 1980s and 1990s. And some evidence from NGOs

that capacity is uneven across regions. Some organizations are better placed than others to interact at this level.

Farm consolidation and changes in labour force composition are significant issues for the sector and have implications for both injury and disease. Farms are larger, involve the management of greater numbers of stock, involve a larger number of employees and or fewer employees (depending on land use); under a range of contract circumstances; and involve a greater number of vehicles and machines over larger territories. How risk is managed on these properties or the nature of employment experiences for workers on these properties remains largely unknown. Addressing human capability for stakeholders in response to these changes is a significant issue.

Women are often posited as the agents of change (but caution is necessary here as rural research demonstrates that rural women are still under-represented on committees and boards in rural areas – and have limited decision making power in this respect). Some in the sector noted an absence of leadership in rural New Zealand and suggested this would impede efforts to encourage participation in prevention at the community level.

## **Part B: Interviews with farmers, farm workers and their families in Southland, Otago, Canterbury, the Wairarapa and Waikato**

The following discussion is based on face to face in-depth follow-up interviews conducted on 25 farms in the regions of Southland, Otago, Canterbury, the Wairarapa and Waikato. Participants included farmers, farmer workers and family members. One interview (Central Otago) was conducted by telephone. In total 30 people participated in the follow-up interviews 25 men and 5 women, aged between 35-76 years. The selection from those who volunteered was done on the basis of region, production type and representativeness of production type for the region. The interviews were conducted between April-June 2008. The purpose of these interviews was to explore more fully issues that the farmers, farm workers and family members wanted to discuss in relation to occupational health, but also to explore their perceptions of barriers to effective interventions that would prevent and or reduce occupational injury and disease in agriculture (Appendix B).

Dominant themes were identified from the interview transcripts and notes. The discussion below is organised in terms of these emergent themes. While there was some diversity in view point amongst all who participated in these interviews there were no significant differences between regions, aside from the key mechanisms of injury identified by participants – where for example differences in livestock (sheep, beef, horses) or differences in machinery (cropping related and irrigation machinery, especially in Canterbury). Overall the participants had very similar experiences and strong similarities in explanations of the origins of disease, why they get injured, notions of what is inevitable, and what should be avoided. Therefore it is possible to identify what can be called a culturally patterned response to occupational health in agriculture amongst farmers, farm workers and family members.

### **I don't really think about them – health and injury**

A number of participants commented that they had not really ever thought too much about their health, injuries or diseases relating to their occupation. In addition, participants revealed that to be too interested in health related matters (if you are not a health professional) is not a “good” way to be, or is in some way demonstrates “a weakness of character”. This was communicated with comments like “oh you don't want to spend too much time worrying about stuff like that” (DS300054); or “I've never really spent time worrying about my health, you just get on and do things”(DS300036); “some people have a tendency to worry about these things all the time, it's not good”(DS300052); or “if you spent all your time worrying about things like this you would be too scared to go outside”(DS300042). Indeed, for many it is considered “unhealthy” (not normal) to spend too much time thinking about occupational health (specifically the risk of injury or disease). And, that it is a “negative” thing to do. Most

said that they might see something in a farming magazine about injury or disease, but they would not seek it out.

As one participant stated (and this is representative of many):

*I don't think of them. Just don't think of them I suppose, and it's not because you're blaze, it's just that you're, well I say I don't think of them...you hop on the tractor and you're going to go down a gully from the top and you wonder if it's a bit greasy today, the grass. You know...oh perhaps I'll leave it till later and let it dry out a wee bit. Yeah, so you do... yeah you're not going to be silly about anything.....but I am more interested in the positive stuff connected to farming – you know seeing what others are doing that is different and succeeding at it. (South Otago D300025)*

Firstly, he only thinks about it as he is about to do a task or while he is doing a task. He does not think about injury and disease outside of the parameters of performing a task (doing). This participant shared with others the view that to dwell on ill-health issues is a negative thing to do.

### **“The best medicine” and “Learning the hard way”**

All of the participants had some experience of injury – many that they identified as “just minor injuries” or “everyday injuries” “or “nothing unusual”. However, three quarters of the participants had also experienced ‘serious injuries’ at least as defined by researchers in the field and those who work at the ACC. These injuries often involved in significant periods of time off work (longer than a month in some instances), but for these participants these injuries were not always “serious”. With the exception of one, all of these injuries were incurred by males, in one instance a boy (aged approximately 12 years).

With respect to the self defined “minor injuries” all were dismissed by most as “nothing really”; “not very important”, “could have been worse”; “just a knock”; “just a scrape”; “nothing to stop me working”. But in some instances these “knocks” and “scrapes” did impair their ability to work – and in these instances this was made clear by spouses who also participated in the interview. These injuries included: cuts, bruises, back related problems, strains, sprains, minor burns, and what was called “minor concussion” by one participant. Slips, trips and falls were common experiences for all participants. In most instances a medical professional was not consulted (with the exception of the concussion case which resulted from a fall). Other common mechanisms were stock and machinery, ATV’s and tractors in particular.

The dominant message amongst the men was the idea that if you just keep going “it will right itself”. In other words the best medicine involves ignoring the condition. Spouses who participated in the interviews challenged this notion of “effective medicine” and were also invariably the person who administered care both immediately and or long term

– they also were likely to make up for any shortfall in labour, when the “minor” injury impaired working ability.

### **‘Serious Injury’, the art of understatement, and different definitions**

Over half of the men who participated had experienced a serious injury that had resulted in time of work (for some up to six months). These injuries included fractures, lacerations, loss of fingers, torn ligaments, crushing injuries, back injuries (slipped disks); sprains and concussion.

Most indicated that these injuries had a profound effect on them, as one man stated “it was a wake-up call” and that since these injuries they have been more cautious on the farm, more aware of what can happen, and how quickly it can happen. Some commented that it was only then, that they realised it could happen to them. They all knew of others who had had serious farm-related injuries and all knew people who had died from their injuries. A common comment was “I had to learn the hard way”; and or “some people have to learn the hard way”.

I asked all participants to recall for me what they were doing when they became seriously injured. These narratives were strongly shaped by understatement. The following examples reveal how the “drama of injury” is contained emotionally through understatement – yet the greater the understatement, usually the more serious the outcome. As the following accounts reveal:

*I had one accident, well; one was with a tip truck. It was, quite, reasonably, serious. Um, broken nose, broken arm. Ahh, what happened? The hoist on the truck pulled out of its retaining piece and then went too far up and we were trying to lower it down with a crane and it fell and well almost squashed me. So, it was a close one. (Canterbury DS 300040).*

#### ***Describing an incident with a farm worker:***

*We were using a grain harvester and it got nudged into gear and ran over his pelvis and cracked things. Um, yeah, it took a long time to sort of come right.*

#### ***And an injury to himself:***

*When I tried to catch a hale bale...it caught me. Well I'd been underneath the thing to try and put the strop on, or to tie it down and it wasn't that secure, and I thought “oh I shouldn't be here”, and I thought the other guy, when he was loading them up, I thought he'd be a bit longer and I'd be able to get it down. And of course he nudged the trailer and yeah, three bales came off the side and the top and one caught me on the shoulder and the middle one crashed onto me somehow and I broke my right leg. They put a pin in my femur and one at the ball joint. [Prompt: what happened after you fell?] after I fell, then I was on the ground and the guy raced around with his forks of the front end loader and lifted the bale up and I sort of popped myself up on my elbow and I pulled out my cell phone which*

*was in my pocket and said “Here you’d better dial 111”. Half an hour later two ambulances and the helicopter arrived, and cut off my nice overalls and the trousers I had on. Gave me a jab in the bum and I just remember going in the helicopter and the next thing I remember I was in hospital....So that wasn’t very clever. (Cell phone coverage on this property is unreliable) (Canterbury DS300037).*

***Another:***

*I can give you two instances...with my ex wife. We rode two wheeled motor bikes over our hill country a lot. But one day I came home and she wasn’t home and I thought she would have been, you know. I think it was about 1 or 2 o’clock in the afternoon, yeah, so that was fine. I carried on and went away down the other end of the farm doing some work. I came back. At 5 o’clock she still wasn’t there. It was a bit unusual. I could see her motorbike wasn’t there either, and I thought oh she must be out riding around. So I was just about to walk out the door and the phone rang, it was my neighbour to say she had taken my wife to the Owaka doctors. I said, “Good god, what happened?” She said “Oh she came off her motorbike”. Apparently (name) had been up around the sheep, up around the hills, and she went to open a gate sitting on her motorbike. She pulled the gate back and she was in the wrong place on her motorbike, just sort of on the edge of a sort of, quite a, sharp drop off – a gully. And she pulled the gate back, got it tangled up in her motorbike and she fell off, over backwards and broke her ankle. So she crawled on her hands and knees down to the house, over a kilometre, down through scrub and gorse and stones on her hands and knees and managed to ring the neighbour, who took her to the doctor. She had a badly broken ankle...well it wasn’t life threatening, but it would have been damned sore. I would have been there anyway sooner or later. The kids would have been there, back from school. That was one. On the same place my father-in-law, years before that had been way up on the top of the hills, and towing a set of discs around behind a 4 wheel tractor. He stopped to get off to, I don’t know whether it was to grease a disc or something, but while he was standing behind the disc, the tractor moved forward a little bit, and the disc ran over his foot. It chopped right through. Well he had to do the same thing...He had to crawl all the way down the hill on his hands and knees basically, or dragging himself down. He wasn’t the best, at the sight of blood he sort of fainted, so it really affected him. And he was quite lucky. He got down to the telephone and managed to call for help, yeah. (South Otago, DS300028).*

**Close calls**

A number of participants had what they called “close calls” or “too close for comfort” experiences. As is evident from the above quote, a close call doesn’t always mean escaping injury – rather for some it simply means it wasn’t fatal. When people said they had had ‘close calls’ I asked them to recall them for me. The following are representative examples:

*Probably the worst thing that happened to me on a four wheel tractor, I was sowing some really steep stuff and I had the drill on behind the crawler, and a bag of grass seed tied to the drill on the back. I was going down a hill really steep like that you know, and I came to a bench, a bit like going over something like this here (demonstrates with hand)[Lovelock: a drop?] Yeah. Oh I know it was there, I had a big blade on the front so I could cushion myself a bit, so you come down over this and as I came down over this, the crawler just shot forward a bit, like that, but fast enough for that bag of grass seed to break the strings that I had it tied on the back. And it came over and it hit me, here, it smashed my head down onto the controls of the crawler. Well I was so close to losing an eye, because the gear levers were there and it hit me there and glanced off the side, and that could have speared me straight through there and I would have gone for all those...even if I'd been knocked out. I mean that thing would have carried on out of control and it would have tipped over, and I would have been history (South Otago DS300028).*

### **On close calls, being young and being a know all**

All of the men commented on young males and their behaviour with machinery and in particular farm vehicles (ATVs and motorbikes). All of the men believed that young males were more at risk, took unnecessary risks, sometimes didn't show respect for the machinery, rode farm vehicles in situations where they shouldn't (too steep, too slippery), were often bad judges of circumstances and that nearly all of their crashes were a consequence of them thinking they knew better and driving/riding at high speed. While all said they warned them, they also said that when they were young they also couldn't be warned. Most argued that it was a "stage" ("its hormonal" was a common comment) that all young men go through, it is just more dangerous on the farm, "because there is more machinery and more that can happen and more that can go wrong" (South Otago DS300028). The two women farmers also highlighted these issues with respect to their male farm workers (aged between 18-26 years).

#### ***A recollection of a middle-aged farmer:***

*I was about 17, I think, or 18 perhaps. And the cocky says "Right I want you to feed out some hay this morning, you can take the hay up to the cattle feeder way up the hill. It's quite steep take the tractor" and he said "You won't get right up to the hay feeder, you'll have to carry those 20 bales probably about 100 metres up to the hay feeder. So anyway, I was getting up this hill "oh, this tractor's easily going to get up to the hay feeder". So I kept on going, didn't I? I kept on going right up to the hay feeder, so I turned around and I went to stop. But the tractor wouldn't stop, even with the brakes on like it was so steep and greasy and it wouldn't stop. It kept on going. I thought "Oh God" and away I went, down the hill with this trailer load of hay on, out of control, completely out of control. I couldn't even steer it. It would have been from here down to the Owaka turn off, that's how far down the hill it went. And I went screeching through two fences. I just crashed through two fences...I shot across the road, there was a gravel road,*



*and the tractor, by this stage it had slowed down, but I still couldn't stop it. It went across the road and dived into a great patch of broom on the other side of the road. Jesus, hay bales all down the hill, skid marks all the way down the hill, there is this tractor buried in this big patch of broom. The boss came back and said "How did you get on with the hay?" I said "You don't really want to know"...he sorted it out and he couldn't believe that I wasn't killed that day either... That is perhaps the best thing that ever happened to me in my farming life, because from that day on I have had a healthy respect of tractors. (Otago, DS300027).*

***Or another:***

*I think a lot of people have frights. They call them frights. Over the years I've had them too. You have a fright and it sort of brings you back to reality you know, that you're not...infallible. I mean, it's just one of those things. (Southland DS300030).*

While seeing all of these recollections in this format I am conscious that they may appear to be "fishing tales" or might even be misread as tales that are told with pride. In all of these recollection instances the participants are trying to illustrate how risky it is and to demonstrate that not only are they aware of the risks but they have experienced situations that have made that awareness "personal".

What does emerge however is that these participants appear to have quite a different notion of what constitutes a serious injury or incident and also that it is only really serious if you do not survive or if you are permanently disabled. This definition varies considerably for those working in governmental organisations such as the ACC and Labour Department. For the ACC serious injury constitutes that which requires some form of compensation and permanent disability. For the Department of Labour serious injury (referred to as "serious harm) is that which involves: death, permanent disability, amputation, burns requiring specialist medical treatment, loss of consciousness, harm that requires hospitalisation for 48 hours or more within seven days of injury (Department of Labour 2008). These differences in definition are not differences in "taking the situation seriously" as some might suggest, rather they are differences in definition of what constitutes a serious injury. Participants know their occupation is risky and also think that some risks cannot be avoided. It is serious if you cannot work again or if you die.

The following participant, who has been farming for 44 years, after working for the New Zealand Wool Board as a shearing instructor and shearing on many stations and in shearing gangs, represents many when he states:

*I think there are a lot of physical injuries due to stupidity. Not thinking, that'd be number one. And doing things in a hurry is another thing. You know? Yeah. And there are certain things that are dangerous and you've got to be careful with them. Certain jobs, needless to say. One of those things are the post hole drivers, they cause fellas to get their fingers squashed and all sorts of things. They are*

*dreadful things. They should have a pretty severe label on them saying that “these things are man killer things”. I know a contractor, who’d done some work for us, and he had good gear and the rope broke, he got thrown over onto some rocks when it broke and he was unconscious, and he still is not right. That was only a couple of weeks ago. He smashed his shoulder and had a head injury you know - because this thing broke. You know there are certain things like that that are a lot higher risk than other things (Southland DS300034).*

There had been no serious injury on this property since he and his family took possession of it in 1963.

### **Fatalism, safety gear and safety courses**

Some of the participants had a fatalistic attitude toward farm work related fatalities. Expressed by this farmer in the Wairarapa:

*I had a friend who was killed. He rolled his quad and he was married with three kids. He could ride a quad just the same as me, but when your numbers’ up, your numbers’ up. (Wairarapa DS300050).*

The majority of participants had attended a safety course and many wore safety gear for some work, especially for chainsaws (ear muffs and boots); but less so with tractors, and not consistently when using chemicals. The participants all thought the courses they attended were useful (FarmSafe™ courses), but some said that “*it makes you think, but then often you just go back to your old ways*” (Waikato DS300047).

Some participants argued that for some jobs it is simply not worth the trouble of wearing the gear and often connected to this was a fatalistic attitude, that you will die from something and none of us know what or when that will be. Being more cautious was often considered by many to be an equivalent substitute for wearing protective gear. For example, when illustrating “safe” behaviour, a number of men would say that they are careful on an ATV, they don’t go too fast, or on terrain that is not suitable; but often this “safe behaviour” is instead of or seen as an appropriate substitute for wearing a helmet while riding the ATV.

### **Musculoskeletal conditions – and sheep farming**

All of the participants commented on musculoskeletal conditions, and most linked this with aging – or noted that damage was done when they were young and that they felt it more now that they were aging. This was particularly the case with lower back conditions which were very common, particularly amongst those engaged in sheep farming and where they had or were working on steep terrain. Some also noted problems with their hips and knees. One participant had had two hip operations and wanted to know why such operations were not covered by ACC as they were “*a work related condition that had just as big if not bigger implications than hearing loss*” (Wairarapa DS300050).

Others noted that all of your joints were eventually affected, wrists, elbows, hips and knees – from crutching, dagging, cleaning out under woolsheds, and lifting.

***Back injury:***

*In my twenties I hurt my back quite badly, in the sense that it limited my ability to work. (On a sheep farm in the Wairarapa). Basically, I think my doctor told me it was a disc problem and he suggested that I didn't continue farming. It was an unusual thing; because I could do some jobs, I can walk, shear believe it or not. But again, it's just twisting (work that requires twisting the torso). I did it scrub cutting over winter...it didn't show up until about three months after I did it...After injuring it, it coincided with the late 1980s farming downturn, (I left farming) and practiced as an accountant for probably about 8 years. As a result over time it got better and now I am back farming. (Canterbury DS300039)*

**Hearing Loss**

Nearly all of the participants commented on noise, especially in the past when using tractors without cabs and other machinery – and all noted that machinery had improved significantly with tractors and closed cabs being the most common example given by participants. Some of the participants habitually wore ear plugs – carrying them with them in their top pocket of their shirt/or jacket, all of these men had hearing impairment from work related noise and not wearing protection for most of the early years of their agricultural employment (as long as 25 years in some cases). Some, however, while aware of noise and hearing impairment, still did not regularly wear hearing protection. And for some, hearing loss was considered a “minor injury”.

***On hearing loss:***

*Another one, a sort of minor injury or one that creeps up on you as you get older obviously is obviously I'm losing my hearing. And it's not too bad, one on one, but again, if you go to a gathering, that background noise. If I went to a dance or something, if there's music, I just can't hear anyone, which is a little bit antisocial and a little bit embarrassing, because I keep on trying to get people to go outside with me or go away from there, and I think I get a few strange looks (laughs).*

***On wearing ear plugs or muffs:***

*I suppose it's the practicalities. I use to cut scrub in my twenties and I never wore anything then (now in his late forties) and now sometimes I do sometimes I don't. For really loud noises I probably should, I should wear ear protection for everything. But again you don't. For example, there's some old tractors I suppose you should wear ear protection. But yeah, I must be honest, I don't. It's just the practicalities, I suppose that sort of thing... Well I suppose if I was going to jump on an old tractor now, at this moment, it would be - Where are the*

*earmuffs now? [Lovelock: Is that because I am here now?] [Laughs] Well no. I would think - where did I leave them? and again, [I'd think] it's only a five minute job and I've really got to get this job done (Canterbury DS300038).*

### **Changing nature of farming and changes in the labour force:**

All of the participants made observations about changing farming practices in their region. One of the biggest changes they had observed was conversion to dairying and the amalgamation of farms. Most also had experienced at some time labour shortages, most noted young people left the area and did not come back, and some noted those that stayed were unskilled, often poorly motivated and made poor workers. Others noted the use of migrant labour, some temporary from the Pacific, and others new migrants from Eastern Europe and South America working on sheep and beef properties, but primarily in dairying and particularly in Southland. With respect to the latter all were concerned that they arrived here with little experience of farming on this scale (most had only subsistence experience with cows for example). Others noted that the influx was good, as it rejuvenated areas and communities that had experienced a significant loss of people and amenities. However, they also noted that most commonly the new arrivals were single men and that this did not help with sustaining rural schools. Others noted the importance of ensuring that migrant workers had appropriate experience and or an education that was relevant to New Zealand farming:

*I think we need more training and it should be across the board. One thing that is concerning me at the moment is these immigrants coming into the country and there are thousands of them. Absolutely thousands of them. And a lot of them can't get onto some of these training courses because the system won't let them. You know, the funding is not available to them. As far as I can see they pay taxes and you know they are earning a wage, why can't they be trained? And it's them that haven't had the experience with the machinery and all the rest. They're coming into these big farms where, you know, they're coming in with all these qualifications and look, we employed a fellow from Uruguay. He had degrees coming out his ears in agriculture. But when it came to practical experience he had nothing. You know he had nothing. And he was a danger. Um, he rolled a tractor, he came off motorbikes and in the end, and this is despite his degrees, we had to find him another job, because he was going to kill himself. (While farming in Taranaki DS 300054).*

With respect to the amalgamation of farms many commented on how it was like returning to the past where there were these 'big runs'. One participant referred to the dairy farms in his region (who were in the main companies that owned upwards of 50 properties in the area, and in one instance one company that owned 132 properties) as the "Dairy Barons" and felt that New Zealand was repeating history with a return to land being held in the hands of a few (Southland, and Waikato, Canterbury, North Otago).

While others commented on the implications for young people trying to get into farming, with the larger properties being beyond their reach and young people were compelled to purchase more marginal land to work with and on. This land was often marginal, often steep or rough countryside, and these participants believed that these factors put these young farmers at greater risk of injury.

Others, especially those who had been farming for between 20-40 years noted the increased mechanisation. They thought that this had made work safer in some instances and more risky in others. Machinery was involved in a large part of everyday work, understanding their machines was a point of pride for all and not understanding their machines, or underestimating or being injured by their machines was embarrassing for all the men. Many of the men explained that technology had advanced a lot, particularly with tractors and they expressed considerable “faith” in the capabilities of various machines. In addition to this, many noted that young men had to learn to respect machinery and to master it and that this took experience.

### **Contracting out – shifted risk**

All of the participants contracted out components of work on the property. All noted that this was possibly one of the biggest changes in the industry. A number noted that this actually reduced their own risk on the property as somebody else was doing what were risky jobs. Others also noted that it “shifted the risk” and that the contractors were not at great risk because they had all the correct equipment and safety apparatus. As one farmer in Southland said:

*I can just about run the farm by using my phone. Today for example the truck came and took the stock. The contractor arrived to cut the hedges, he had his earmuffs on, inside his closed in sound proof cab, and in a few hours he had done the boundary. In the past I would have done that by hand, with a chainsaw, no earmuffs and it would have taken me weeks. (Southland DS300034).*

### **Casual workers – and ‘retired’ workers**

On some of the properties where they had experienced difficulty recruiting skilled or experienced labour, they employed retired farmers – as casuals. The benefits of this practice were they argued that these workers could work unsupervised, knew what they were doing and had good work ethics.

Amongst older workers that I interviewed, all of these men said they were slower, had to be more careful because their reaction times were slower, were more easily hurt – for example all wore gloves because of thinning skin and because they had noticed that their skin got cut and damaged far more easily. The oldest worker and farm owner was 76 years old.

### **Family workers**

All of the participants relied on family labour at some time, or had in the past. Only one family had experienced a fatal injury on their farm and it was the fatal injury of their teenage son as a result of an ATV crash. One other family had had one son fracture his skull. He was a passenger on the ATV/quad bike that was being driven by his father with other children on board (who were visiting that day) (Wairarapa DS300049). The same participant thought that the amount of material generated on injury and rehabilitation by ACC was “absurd”. She had been sent a rehabilitation folder when she had been on accident compensation for a broken leg. She was also opposed to any regulation arguing that it was the equivalent of [being told] “what to have for dinner” (Wairarapa DS300049).

The majority of participants said that the biggest risk on their farms was when people came to visit with children and when their children and the other children played on the farm. Many said that most of the ATV injuries in their area were recreational, not work related.

All of the participants believed that growing up on the farm was the best way to learn how to respect machinery and know about the risks on the property. Only one participant said that he would only use family labour and would not hire any workers, when pressed as to why this was, he said that in this way he didn’t have to worry about “stupid OSH requirements”. I asked him what kind of requirements and he said “you know warrants on bikes and things like that”. His concern was that if a paid worker got hurt he would be liable (Waikato DS300047).

### **Access to Health Care**

None of the participants had concerns about access to health or emergency care, despite the fact that some of the properties were quite remote (an hour to an hour and half away from the nearest town in several instances). Most could be transported to a regional hospital by helicopter within half an hour. The only concern expressed with respect to ill-health care was in two cases where spouses had been treated for cancer and where the need for ongoing prescriptions was necessary and where they had to travel some distance to get these prescriptions filled. Also travel for initial treatment (chemotherapy and radiation) meant extended periods away from home. With respect to response time for injury all of the participants felt that they had good service and that their relative isolation was largely irrelevant because of the use of helicopters. This was despite there being poor cell phone coverage on a number of these properties.

### **Enforcement**

The issue of enforcement is the most contentious. For non-governmental organisations who act as advocates for some of the farming population, there was a very strong view about enforcement. They argued farmers do not want enforcement; would resist enforcement and enforcement wouldn’t work logistically. It is clear that with current

staffing levels at the operational level that enforcement would not be possible. Amongst the farmers and spouses that I interviewed most did not want enforcement. But their opposition was not as fierce as it was suggested it would be by other stakeholders. Some were just opposed to any form of regulation and others could see that it could serve to motivate some action on some properties.

*I am very much against regulation. I think the problem with regulation, even from a national political point of view, is that you are really just forcing your views on the rest of the population aren't you? By making a rule, you're saying that everyone's got to do this or that...I think it creates more problems than it is worth. The ultimate regulation is something that is self-regulating...I was told many years ago of a Roman Emperor, and he again, he basically put up everyone's rates. And everyone was in revolt, so he said "Ok you choose the value of your property, of which I can rate against. But the only twist is that I'm allowed to buy your property at that value. And, I've always remembered that, because that is self-regulating isn't it. (Canterbury DS300037).*

However, some of the participants, all of whom sent their workers to safety courses (run by FarmSafe™), and whom supplied safety gear, and insisted their workers wear it and wore it themselves; were in favour of some form of “demonstrated enforcement”, that is, a demonstration on the part of the state that legislation can be enforced through inspection on these properties. Enforcement for these “farmers”- employers - was seen as a means of reinforcing what they as employers were insisting on from their workforce and where some of their workers resisted wearing safety gear and had to be constantly “hassled and or nagged” about it. For example, one of the women participants who was managing a large property and employed a number of workers had used my visit as an opportunity to “scare” her farm workers – she told them I was coming to inspect the property and to see if they were using the safety gear she had provided. She said “it worked” they all became suddenly very motivated and quite concerned and she noted they all wore their safety gear that morning when they set off to work (without being reminded). From her perspective being able to demonstrate that the safety measures could be enforced would help her workers accept that this was not just her management style or as she said: [not] “just her thing or her nagging unnecessarily; or just because she was a typical woman”; but because it was the law”. She stressed enforcement would be helpful to her as an employer (Waikato DS300045).

## **Education**

A number of participants thought there should be ongoing education in the agricultural sector. Others said they felt that farming was either “behind the times” or as one man said “stuck in a time you’d rather not think about” (in terms of labour relations).

*It's a mindset. And I think farming really is behind the times. When you look at forestry, or the Ministry of Works, you look at those sorts of industries. Even the truckies you know, you see them out there with their high v's and you know they're all doing the health and safety thing. Farming is a huge industry. Why*

*shouldn't we be part of that whole mindset you know? Why shouldn't we be doing something proactive as a group, rather than, you know, we have got organisations out there running courses for us, and they're blooming free! And still people aren't interested you know. So, it's almost a case of, you've got to make people do it. And a prime example of that is the agrichemical recent certification requirement. You know, where people had to have their registration done by the 1 January 2007. And so, people knew they had to go and get it. And they did. And they learnt something. They actually came away from courses saying "Oh I learnt something there" (North Otago, DS300054).*

Others noted that many farmers, including themselves didn't make safety plans or "things like that" because they do not like to write things down, or do "written work". For some, written plans were a waste of time and money and for others they did not want to read about injury or disease in their sector.

### **Disease**

Two of the male participants had had leptospirosis and brucellosis; both stressed how debilitating these diseases were and how it took months to recover. Both diseases significantly impacted on their ability to perform farm work and both said it took some time for their General Practitioners to diagnose what was wrong. Overall, most did not express a concern about occupational diseases in their sector. However, there was widespread awareness and concern about the possible health dangers of using pesticides, herbicides and insecticides. Many of the men had applied 245t in their early years of farming, without protective clothing and often returning after spraying gorse completely saturated in it. The concern here was that the development of a disease was "invisible", that in the words of one man "*you do not know it is happening, often until it is too late. This is what worries me about chemicals, they get in and changes happen, but you can't see those changes they are invisible*" (Wairarapa 300051).

### **Cancer**

Three of the spouses who took part in the interviews had had cancer (breast, abdominal and ovarian). Both the spouses and their husbands did not think the cancers were related to agricultural work with the exception of one; where she believed that a serious fall from a ladder, where she experienced significant bruising, some months prior to diagnosis was linked to her abdominal cancer.

### **Cardiovascular Disease**

No personal cases cardiovascular disease were noted by the participants; but one observed of the area he was in (Canterbury Plains)

*I think that one problem all farms have is heart problems. ..It is amazing the number, including my father, who you know; they get to about late 60's and or early 70s and die of a heart attack. I've just been to the funeral of a chap I*



*worked for 20 odd years ago. He got to 71. Every second father (of people in the district) has died of a heart attack... just why? . .it seems to be that crucial age and if you get past it, if people get past 70-73, they can get to 80. It seems like there is sort of an advantage in being able to just get over that (Canterbury, DS300038).*

### **Exposure to pesticides, herbicides and insecticides – “chemicals”**

Nearly all of the participants spoke about using pesticides, herbicides, insecticides or “chemicals” on their properties and all had obtained certification for use and all had attended a safety course, with most noting it was a FarmSafe™ course. Without exception they expressed how valuable this course had turned out to be; some noting that they had thought it wouldn’t be useful or that they would learn anything and that were pleasantly surprised and did learn things (North and South Island interviews). Some said they still did not use all the gear recommended, but were a lot more cautious using chemicals. Most also noted they personally used less pesticides, herbicides and insecticides than they use to as many now contracted this work out. In one instance workers on the property used the chemicals and they were provided with the protective gear and the owner enforced its use – even when met with resistance by young workers.

Another participant noted that some people in his district didn’t do the course and some suppliers were not even asking to see the certificate. He said that there were loopholes and that the lack of enforcement or awareness of these loopholes made “a mockery out of certification” (North Otago DS300054).

### **Pesticides and differences between farmers and farm workers**

However, in another instance, a farm worker and his fellow workers were not provided with safety gear when dipping sheep or when applying pesticides, herbicides, and insecticides. At times they were exposed to fertilisers and insecticides from top dressing planes – when the farm manager failed to tell them that spraying would be occurring on certain parts of the property. They were not provided with enough ear muffs so most workers had to go without. The property owner owned four farms in the district and the working conditions according to this farm worker were the same on all four. This farm worker had worked on a large number of the properties in this district (over 25 years) as both a shepherd and a shearer and described working conditions on all of these properties. Coincidentally I interviewed two farmer owners that he referred to as “good employers” but unfortunately the owner of the four properties who regularly failed to supply safety equipment was not a participant in this study. However, the participating farm owners did confirm that there were some bad employers in the district. Here bad employers meant they did not provide adequate safety gear, could see no need too, saw it as an unnecessary expense and felt that they could simply replace dissatisfied workers reasonably easily. From the farm workers perspective, not surprisingly, he felt there was very real need to find out what is happening to farm workers on farms in New Zealand and to enforce health and safety regulations on farms. He felt that many farm-workers’ were powerless to do anything about employers who did not provide safe working

conditions and many were too scared to speak out in his district. He had personally taken a grievance against one employer which was found in his favour but in his words “there was no financial compensation, not that that mattered to me, it was more to demonstrate that he should not be allowed to get away with this sort of thing” (North Island <sup>13</sup>DS3000)

All of the men had used the chemical 245t and mentioned the conditions that they used it in and the lack of protection. Most had some retrospective concern about this. It was generally used to spray gorse in the summer and in hilly country, it was often windy and they were not wearing protective gear – either because at the time they didn’t think it was necessary or because it was too hot and too hilly to be worried about. Some of the men, after spraying with a range of products said they had itchy skin, itchy eyes, rashes, felt nauseous, had trouble sleeping, it affected their memory, felt depressed and they had a “funny taste “ in their mouths “like metal”.

## **Social connectedness and Isolation**

### **Mental health, stress and being able to talk about it**

A number of participants considered stress to be one of the biggest health issues and the biggest barrier in the farming community was getting people to talk about it. One participant said that although there were counselling services in some of the towns farming discussion groups were the best thing:

*It took a while for people to talk, but they do, and we all face similar issues. And learning that the guy down the road is having the same problems does make it seem not so bad...and that they are not alone, that Joe Blogg’s down the road is probably going through this too (Southland (sheep farmer)DS300030).*

When prompted these participants agreed they were referring to men, that it was men not women who had difficulty talking about stress.

### **How isolated did they feel?**

Most the participants said that they did not feel isolated, that they were not very far from the nearest centre (the greatest travel time was an hour and a half from the nearest town). Many noted that they have people coming and going all the time – in all instances they are referring to the various contractors that are used on the property. Isolation was only mentioned in relation to people being stressed. It was in all instances used to refer to a state of mind. Many stressed that in the past farms were isolated, because roads were poor or they didn’t get to town often, or when women didn’t drive, but now with women driving, most teenage children driving, improved telecommunications and more people coming onto the property to perform certain tasks, the farm was not really very isolated at all. This is interesting, because those who live on the farms do not experience this as an

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<sup>13</sup> The district remains confidential to protect this participant’s identity.

existence within an “autonomous unit” or as being part of a dispersed community, or as living in isolation. In addition, many commented on the growth of lifestyle blocks in their areas and how now they had considerably more neighbours than ever before. And while some communities have been experiencing population decline for the last two decades, others were experiencing some growth with the development of larger dairy units and an increase of young single workers moving into the area.

Only one couple said they did feel isolated and did not have a very strong social network, this was because they had only recently moved to the area and both acknowledged it took a long time to become a part of a rural community.

### **Addressing occupational health in agriculture**

Participants suggested a number of methods, including advertising in magazines (farming related), newspapers in the rural section; television and radio. The majority also said that they were inundated with information through the letter box and that most of it ended up in the rubbish bin. Many said they had experienced an information overload. Some said they would use the internet, while others said they did not use it nor did they want to use it after they came in from work. Others suggested that only “the important things” should be focussed on:

*You really want to focus on the important things, in other words, very often, so many times, you see advertising campaigns or advertising in the paper, or something like that, and basically a lot of it focuses on the unimportant. You know, in other words, you must wear a helmet on a four wheeled bike. Well you know, you see that and “Oh goodness, you’re probably right, but again, you know, one day, maybe” sort of thing...whereas if you focussed on - ah – something like farmers getting heart attacks. I don’t know if it is an issue or not, but if you focus on something that is a major danger -something where it is serious harm (Canterbury DS300034).*

While others expressed annoyance at how farmers and farming people were portrayed in advertising, giving specific television vehicle advertisements as illustrations of how farmers are constantly portrayed as “stupid”, “macho blokes”, “brainless” and or “basic”, and or ‘just crude’. These participants asked why it was that farmers were portrayed in this way when many were educated and not remotely like those “stereotypes” (Waikato, Canterbury and Southland).

### **Perceptions of Governmental agencies**

Most of the participants’ comments suggested a considerably more empathetic perspective of those working in the state sector than the perceptions outlined by state sector stakeholders in Part A would suggest. This is not to suggest that the state sector people have not encountered behaviours that convey negative perceptions of them but more to note that maybe those who contact them or they come in contact with– are not representative of all people on farms – and they are in this instance, not representative of

the farmers and their spouses who I interviewed on farms, nor the farm workers. Only one expressed any hostility over health and safety requirements, and only one expressed some contempt with respect to follow-up on her rehabilitation after a leg injury and time on compensation. Both of these participants had had serious injuries happen on their farm, one to a child family member and another to a worker. None were wholly supportive of the idea of enforcement, mostly because they didn't think it was feasible and or that it wouldn't necessarily bring about change where it was needed.

**In summary:**

While there were a wide range of issues raised, some of which were more important to some participants than to others, there were also strong common themes that could be observed in the transcripts of these interviews.

The first could be described as an evident stoicism toward ill-health and or injury; this was the case for both the men and the women. However, amongst the men there was a dominant tendency to understate injury or harm and to dismiss any preoccupation with health as somehow “unhealthy” or a sign of a “flawed” or “weak” character. This did not mean that they were unconcerned, but rather there was cultural tendency to downplay health or health issues in their lives.

In connection to this evident stoicism was a vocational identification to the work they do; most could not imagine not farming, it was not just a job. The implications here are that they would often keep on working with an injury (such as a back condition) as doing the work was more important (not just economically), but also in terms of their identity, and an underlying belief that it would right itself if they just kept on going. A stoical tendency toward injury has been observed in other research focusing on occupations that are considered vocations by those who work in them and occupations that require a high degree of physicality, e.g. Boxing and ballet (Turner 2003; Wacquant 1998) and is arguably evident in rugby here in New Zealand.

There were also evident differences in the definition of what constituted serious injury. That is, different from that held by researchers and or government agencies. In the main, amongst these participants, a serious injury was one that killed you or seriously disabled you so you were unable to work again – for example, if a head injury, then it was serious if you, in the words of one man “ended up a cabbage” (Wairarapa DS300050). Anything less than this was minor or at least considered fairly insignificant. An injury that resulted in a lengthy time off work was moving into the serious category, but still minor, if they recovered from it. Whether or not you would be compensated for the injury did not seem to feature in how seriousness was defined.

Having close calls, near misses, or frights brought about changes in behaviour, or what is called a “respect” for the risks of using certain machines or working with animals, of working at heights. Experiencing a near fatality changed behaviour. Knowing of someone close who had died in a farm related incident also had some impact on

behaviour. Having a member of the family die from a work related farm injury changed their lives.

Working alone was a significant factor for all the men, not having somebody else to look out for things that might happen. The lack of surveillance that working with others provides and the inability to rely on somebody if something happens are key features of working on these farms. However, in some instances, serious injury did occur when they were working as part of a team – or “gang” and where something was done that the team member did not anticipate. Surveillance is not non-existent on these farms, family members, spouses and children often fulfil this function for men: knowing where they are, how long they will be, what they are doing, and responding when they deviate from all of the aforementioned.

Working with machines is central to a farming way of life. All of the men had machinery related injuries at one time or another, all thought that it was necessary to “respect machines” and the risks which they presented to their operators. All thought that technological advances meant that machines today were far more reliable and safe than those in the past (with cabs, less noisy, four wheel drive, ROPS) and most of the men demonstrated considerable faith in their machines, if not always in their ability to master them. Machinery related injury was embarrassing for many of these men, this embarrassment points to the importance of mastering machines and it’s relation to masculine identity. In particular for men who work machines as part of the daily employment and or working life in New Zealand society (not only tractors, but computers too). This has been highlighted in other research findings that have focussed on the importance of working with machines to masculine identity in a range of occupations and employment situations, also in relation to recreational pursuits; for men of all ages in New Zealand society (Lovelock 1993; Lovelock 1999).

Focusing on the positive aspects of farming was important for all of the participants and in the main, this also means not focussing on injury and disease. Prevention of injury and disease means focussing on it, as this is not considered a positive experience many do not want to do it. This is also in part connected to an evident fatalism amongst the participants- “When your times up, it’s up”; there is no point in worrying about it because it will happen anyway. This finding is consistent with other research that demonstrates that most rural men are not proactive in terms of preventive health care, screening or otherwise and this has been implicated in rates of cardiovascular disease (Beaglehole 1990, Frazer 2006) and with respect to the mental health issues raised, particularly stress, they are not proactive in following through on this with medical practitioners either. Some international research suggests this is not unusual in other farming communities and that men will present to their general practitioner’s with physical symptoms just days or weeks before they commit suicide, but will not have communicated about any stress, anxiety or psychological problems (Booth et al 2000). Further, rural women also have lower rates of participation in screening (cervical, breast). This is in part shaped by access to screening in rural areas and in part shaped by a culturally patterned behaviour, which ensures that prevention (or screening) is not considered a priority and or is not a positive experience (cited in Frazer 2006).

Defining risk is of course an exercise in power, irrespective of who is doing the defining. The lack of fit between the governmental, research, and farming community definition of risk is in part about resistance, and exercising power (on all parts) (Slovic 1997). The definition of serious injury amongst this group is a lay epidemiology and it makes sense not only to them but also to the context within which they work. To up play every ailment or injury and to take time off to recover is not an economically viable thing to do when you are often reliant on a very small labour pool (if on a family farm). It would be interesting to know if similar patterns exist with those working for corporate entities on large productive units.

Shifts and changes in labour arrangements, in particular contracting out work has ensured that the farms in this study are no longer as “autonomous” as they once were, indeed many people come and go from the property at any given time. The workforce is not then concentrated in terms of residence either, and as many observed this has meant that many of the risks they once faced are no longer their risks. And while contractors might be at risk they are better prepared for it – in terms of safety gear and up-to-date equipment. This of course is the case for those who are in economically viable circumstances and where they can afford to contract out. Those in more marginal circumstances cannot, work long hours, work alone (cannot afford labour) and are arguably more at risk of serious injury. The cultural pattern of not thinking about risk of injury or disease, would in these circumstances offer a degree of psychological protection, but they are nonetheless much more vulnerable to injury. Economic circumstances undeniably shape the level of protection one can afford.

Most do not want to read about injury and disease statistics in their sector. This is consistent with the argument that what motivates people to change their behaviour is not some abstract risk (even if real to some) e.g. male agricultural workers 21.2/100 000 fatal injuries between 1984-1994 (Horsburgh 2001)); but rather the real risk of injury and disease is the risk it might pose to their plans and dreams (White 1999, Trostle 2005) or as some have recorded the real cost (Adams et al 2002).

There also appears to be a gendered difference in how risk is perceived – this emerged not only in the interviews, and particularly when spouses were present, but is also evident in the statistics. There is no other New Zealand research that addresses the gendered nature of injury or disease with respect to agriculture. However, research in the United States suggests it is not just gendered but often shaped by ethnicity as well. This study found that “white” males consistently perceive the risks of potentially hazardous activities as lower than both “white” females and “non-whites”, of both sexes (Slovic, 1997: 73 in Trostle 2005). What this suggests is that social and economic status is a shaper and or determinant of perceptions of risk. The international and local literature does show that male farmer/operators are at greater risk of injury, both fatal and non-fatal (Feyer 2001; Franklin 2001; McCurdy and Carroll 2000).

For many participants culture was equivalent to ideas and beliefs and they thought variously that ideas needed to change, or they needed to be a culture change in the

agricultural sector. But culture is not just about ideas, it is about what we do, how we do it, how our doing is constrained and who decides what health problems are important and what health problems can and cannot be resolved in this sector. It is not just about converting minds in this sector it is about a “culture change” as one participant stated. And this change is about deciding about what can or cannot be resolved. It is about addressing the differences in how various stakeholders define serious injury and risk and acknowledging that the sector is diverse and addressing the fact that not people on farms have an equal say over what happens. It is evident from these interviews that employees, children, and some women on farms have are arguably vulnerable to greater risk on some properties throughout New Zealand.

There is a need to know more about the changing nature of labour and labour arrangements on farms. There was some evidence in this study that being a farm worker can mean that you are vulnerable to increased risk if your employer is unwilling to provide protective equipment. And in once instance, an employer was constantly having to reinforce wearing safety gear and thought that state enforcement would assist her role as a responsible employer.

Perceptions of government workers were considerably more empathetic amongst those in the farming community, than what the experiences of many government employees indicate. However, amongst most there was a resistance to the idea of enforcement or “regulation”: for most, for pragmatic reasons; and for a minority, because it was seen as unnecessary state interference.

Finally, it is possible that this initially self selected group of participants were more likely to be open to the idea of addressing injury and disease in agriculture; and might have presented more “moderate” views to a researcher or tried to adapt responses to meet with what they thought the researcher wanted to hear. While this is possible, I think most if not all of the participants addressed their perspectives with integrity – and even when they thought they should say they were using safety gear, they did not, emphasising that they should be honest. Thus, whether these views or positions are those of the majority or not, they are the views of this group of people as they chose to express them, and they are the views of those whom live and work in the farming community of New Zealand at this particular point of time.

## **Conclusions**

### **Government, non-government and industry stakeholders**

There are many people and organisations addressing injury and disease prevention. However, there is no long term prevention strategy for injury and disease that specifically addresses the agricultural sector. Having a strategy would facilitate a more refined focus on the problems in this sector and would also facilitate more effective co-ordination and collaboration amongst stakeholders.

Relying on stereotypical definitions of “farmers” and the rural community is a culturally patterned response to the agricultural community. As with all stereotypes, these stereotypes imply that the “farmer” and rural community are “one type: and or homogeneous. It is important to be explicit about these stereotypes because as with all stereotypes they are at times used as a proxy or substitute for empirically established, or documented social actualities; and belie the considerable diversity that exists within the “farming community” in New Zealand. They can and do distort or exaggerate commonalities within the farming community; exaggerate the differences that exist between rural and urban New Zealanders and potentially inhibit a critical understanding of the nature of the “farming community” and how fatal and non-fatal injury might be more effectively addressed.

There is common recognition of the need for an agreed upon strategy, that is informed by research. In the absence of this there will continue to be coordination issues, a lack of coherence, issues surrounding the efficacy of specific interventions, duplication of effort and a concentration of effort at the macro level (with little or no involvement at meso and micro levels).

It is clear that there is intra-sector collaboration; however, effective sector intervention is at times undermined by internal and inter-organisation politics. Participants noted either a lack of resourcing in some areas; or problems with how resources are allocated as barriers to collaboration. Others identified understaffing the operational level as a significant resourcing issue that undermined enforcement of health and safety legislation. While institutional restructuring (in the government departments), which resulted in a loss of staff, uncertainty for staff, loss of institutional knowledge, the emergence of gaps in delivery; and often too shifting priorities, was a significant issue for those who have a mandate to address occupational health and injury and disease. Restructuring, that in one instance had lasted three years and was still ongoing, was often demoralising for those who felt they were starting to make a difference in the sector and where constant change undermined some initiatives, stopped others and/or ensured some were no longer possible.

Some organizations in the sector have limited ability to engage at the level of locality and regions and for these organisations they lack skilled personnel to engage in the localities. There are a limited number of personnel available to enforce health and safety requirements and those currently employed in the inspectorate have responsibility for a number of sectors.

The interviews with stakeholders revealed that the approach to addressing occupational injury and disease in this sector has been a ‘top down’ approach; (with the exception of FarmSafe™ which once operating engaged people to run courses from rural communities) However, there is a recognized need amongst those in the sector that all stakeholders need to work together. It was also the case that many thought that at times the relationship between the state and the agricultural sector had been and was strained.



Little is known about the capacity of the rural sector to address injury and disease prevention. There is some evidence that capacity was undermined during economic restructuring of the rural sector in the 1980s and 1990s. And some evidence from NGOs that capacity is uneven across regions with some organizations being better placed than others to interact at this level.

Farm consolidation and changes in labour force composition are significant issues for the sector and have implications for both injury and disease. On average, farms are larger, involve the management of greater numbers of stock, involve a larger number of employees and or fewer employees (depending on land use); under a range of contract circumstances; and involve a greater number of vehicles and machines over larger territories. How risk is managed on these properties or the nature of employment experiences for workers on these properties remains largely unknown. Addressing human capability for stakeholders in response to these changes is a significant issue.

Many participants thought that women were perfectly positioned to be the agents of change on farms in New Zealand. This may be the case, but caution is also necessary here, as some rural research demonstrates that rural women are still under-represented on committees and boards in rural areas, have limited decision making power in this respect and that change needs to occur both on the farm and beyond the farm gate. While more generally, some in the sector noted an absence of leadership in rural New Zealand and that this would impede efforts to encourage participation in prevention at the community level.

### **Farmers, farm workers and their families**

The evident stoicism toward ill-health and or injury for both the men and women has implications in terms of people continuing to work with some injuries and potentially aggravating conditions. The tendency amongst men to understate injury or harm and to dismiss any preoccupation with health has implications for interventions that require them to focus on their occupational health. The key dilemma is, how can this population be encouraged to focus on occupational health and avoid their own and the judgement of their peers that this is a weakness?

Farming as an occupation is also considered a vocation by these farmers, most cannot imagine not farming. Their agricultural labour is central to their identity and this in part feeds into the aforementioned stoicism. Both the stoicism and the vocational nature of farming is not unique to this occupation, it has been observed by other researchers focussing on professions such as boxing, ballet dancing, professional rugby and other occupations requiring a high degree of physicality (Turner 2003; Wacquant 1998). With respect to injury the central issue here is that doing the work, irrespective of aches and pains or other ailments is more important than not doing the work, and this is not solely for economic reasons, to stop, is to stop being a “real farmer”.

For these participants what constituted a serious injury as an injury that was permanently incapacitating (death) and or incapacitating for a lengthy period of time (a permanent alteration of being – disabled either physically or mentally or both). As one man

observed it was serious if you “ended up a cabbage” (Wairarapa DS300050). Additionally, whether or not you would be compensated for the injury did not seem to feature in how seriousness was defined. These ideas about what constitutes “serious injury” need to be borne in mind when addressing occupational health amongst these workers.

All of the participants recalled what they called: close calls, near misses, or frights, and all claimed that these experiences brought about changes in behaviour, or what they called a “respect” for the risks of using certain machines or working with animals, of working at heights. Experiencing a near fatality or knowing somebody who had died while working in agriculture, they claimed had an impact on their behaviour. For those who had lost a family member to agricultural injury they claimed it changed not only their lives but that they also had become involved in advocating changes in behaviour in the sector so that injury and particularly fatal injury rates could be reduced.

Working alone is very common in this sector and the lack of surveillance that working with others provides is and will be a significant challenge for those who design interventions for the prevention of agricultural injury and disease. Interestingly however, these participants also experienced injury when they were working as a member of a team and nearly always this was because they failed to anticipate the actions of another. This might in part be because they are so use to working alone. Surveillance on farms is not non-existent, often family members fulfil this function, making an effort to know where the person will be working, what work they are doing and when they are likely to be back at the farm house. Nonetheless, more often than not those working in agriculture are required in large part to “self survey” their behaviour.

Machines and vehicles are central to a farming way of life. All of the men had machinery and or vehicle related injuries at one time or another. Many spoke of the need to “respect machines” and to be aware of the risks machines and vehicles presented to their operators. All thought that technological advances meant that machines today were far more reliable and safe than those in the past (with cabs, less noisy, four wheel drive, ROPS). The men also demonstrated considerable faith in their machines, if not always their ability to master them. Machinery and vehicle related injury are very prevalent in agriculture and for these men injury as a consequence of machinery or loss of control of a vehicle was considered embarrassing. Other research has demonstrated that mastering machines is an important component of masculine identity for men whose occupations involve mechanisation – both in industrialised production and also for those working in the knowledge economy; in this respect men working in agriculture are no different from other men in other industries (Lovelock 1993, 1999). How men learn to use their machinery and their level skill are clearly areas that should be addressed. How this is achieved needs to factor in the importance placed on mastery, to appear to be masterful and the embarrassment associated with not mastering machinery.

The research revealed that focussing on health was not a priority for these men and women, but particularly the men, and that this was also connected to an evident fatalism about farm related injury and disease. The relative lack of pro-activity with respect to

preventive health care is consistent with other research that demonstrates that most rural men are not proactive in terms of preventive health care and seeking out such options as screening. This reluctance to engage with preventive or surveillance technologies has been implicated in rates of cardiovascular disease (Beaglehole 1990, Frazer 2006) and mental health issues, particularly stress, depression and suicide. Indeed some international research suggests that men will not necessarily present with a mental health problem to their general practitioner, but rather will present with physical symptoms and not mention psychological problems just days or weeks before they commit suicide (Booth et al 2000). Further, rural women in New Zealand also have lower rates of participation in screening (cervical, breast). These lower rates are in part shaped by access limitations to screening in rural areas, but is also are a culturally patterned behaviour, where prevention (in this case screening) is not considered a priority and/or because it is not considered a positive experience is not sought by these women (cited in Frazer 2006).

There are clearly issues around notions of risk and how serious injury is defined. Amongst these participants their definition of risk and serious injury is a lay epidemiology that makes sense not only to them but also to the context within which they work (Slovic, 1997). That is, it makes sense not to play up every ailment or injury and to take time off to recover as this would impact on the economic viability of the business and particularly when you are reliant on a very small labour pool (often family). It would be interesting to know if similar patterns exist with those working for corporate entities on large productive units.

It is debatable whether farms have ever really been autonomous units, but it is clear that shifts and changes in labour arrangements in this sector have ensured that farms are not as autonomous as they may appear. Contracting work out is a very common practice according to those who participated in this project and it has ensured that many people come and go from the property throughout the year performing tasks that can be and often are risky (for example, harvesting, fencing, shearing). Many remarked that when they contracted out they were also contracting out risk and that contractors were better equipped to address risk, with up-to-date machinery and safety apparatus being central to their business operation. It is also the case that the workforce is not necessarily concentrated in terms of residence either. But contracting out risk is only possible if a property is economically viable. For those in more economically marginal circumstances this is not possible. Commonly too, these people work long hours, often work alone and arguably are exposed to more risk of injury and disease. While not thinking about ill health might provide a degree of psychological protection for these people, it does not provide any protection from injury or ill-health. Economic circumstances undeniably shape the level of protection one can afford.

For many, reading about injury and disease in their sector is not something they want to do and many said it would not change how they behave on the farm. The reluctance to engage with abstracted accounts of injury and disease is consistent with the argument that what motivates people to change their behaviour is not some abstract risk (even if real to some) e.g. male agricultural workers 21.2/100 000 fatal injuries between 1984-1994

(Horsburgh 2001)); but rather the real risk of injury and disease is the risk it might pose to their plans and dreams (White 1999, Trostle 2005) or (as some have recorded) the real cost (Adams et al 2002 ).

Perceptions of risk also appear to be gendered. Men and women appear to perceive risk differently and this emerged not only in the interviews, and particularly when spouses were present and also interviewed, but is also evident in the statistics. While there is an absence of New Zealand based research in this area, research in the United States suggests it is not just gendered but often shaped by ethnicity and socio-economic status as well. Slovic (1997) found that “white” males consistently perceive the risks of potentially hazardous activities as lower than both “white” females and “non-whites”, of both sexes (Slovic, 1997: 73 in Trostle 2005). White males are more often farm owners and decision makers on farms in the United States and are more likely to be operating profitable operations, as opposed to economically marginal operations. What this suggests is that social and economic status is a shaper/determinant of perceptions of risk. The international and local literature does show that male farmer/operators are at greater risk of injury, both fatal and non-fatal (Feyer 2001; Franklin 2001; McCurdy and Carroll 2000).

Stakeholders repeatedly mentioned the changing nature of labour and labour arrangements on farms in New Zealand. We currently have a poor understanding of these changes and this absence in the research record needs to be addressed. For example, there was some evidence in this study that being a farm worker can mean that you are vulnerable to increased risk if your employer is unwilling to provide protective equipment, but we know very little about the extent of this kind of problem in this sector. And, similarly, one employer in this study found that she had to constantly reinforce wearing safety gear and she thought that state enforcement would assist her role as a responsible employer in this respect. Again we know very little about whether this is a common experience for employers and or how they enforce or regulate safe behaviour on their properties.

Amongst the participants in this study, perceptions of government workers were considerably more empathetic than what the experiences of many government employees indicated was their experience, from their interactions with members of the farming community. There was non-the-less evident resistance to the idea of enforcement or “regulation”: generally for pragmatic reasons; and for a minority, because it was seen as unnecessary state interference.

Overall, there are differences in perceptions amongst the participants but there were also strong commonalities. All of the participants in this study thought that the current non-fatal and fatal injury rates and occupational disease in agriculture needed to be addressed. None of the participants thought nothing should be done. And, despite differences in the understandings of what constitutes serious injury, there is consensus over fatalities; they are unacceptable to all of the participants in this study.

The agricultural community is diverse and any interventions must address this diversity. There are clearly people who are more at risk than others. Of those more at risk some have relatively less control over that risk than others for example, children, farm workers, and those working on properties that are economically marginal. For those on economically marginal properties there is limited ability to procure safety equipment or technological interventions which might prevent injury. On these properties there is also limited ability to employ labour that might mitigate against working long hours and or being unable to address maintenance issues. These workers are more likely to be exposed to known risk factors: fatigue, stress and inadequate maintenance of technology and or the property.

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## Appendix A

Stakeholder interview schedule: for governmental, non-governmental, industry and education organisations.

**STAKEHOLDER INTERVIEWS** (specific questions modified depending on the nature of stakeholder/stakeholder involvement etc)

1. Participants work history – specific to this field (prompt re what did they bring to their role in this organization)
2. What do you think are the key issues facing the sector? (generally – then specifically in relation to occupational health)
3. How would you describe your organizations involvement, firstly in the agricultural sector, (describe organizations function and key relationships in the sector (lesser relationships and why)
4. Could you describe your organizations involvement in occupational health issues for agricultural workers? (over time)
5. What specific challenges does your organization face with respect to addressing occupational health/interventions in agriculture?
6. Are there limitations with respect to what your organization can do in addressing occupational health issues in agriculture ( what are they?)
7. Can you outline for me any initiatives that your organization is currently involved in?
8. Can you outline for me any planned future initiatives?
9. What place do you think policy/legislation has with respect to health interventions in agriculture?
10. What role does advocacy have in your organization (specifics of any advocacy role)
11. In your view, how do you think organizations within the sector can best respond to injury prevention?
12. What are your perceptions of the capacity of the rural sector (community) to solve/reduce the injury rates?
13. What kind of an approach is required?

14. What would you consider the main inhibitors of cross-sector involvement in injury/disease prevention to be?
15. What would you say are the dominant features of workplace culture in agriculture?
16. What do you think an “ideal” injury rate would be in agriculture?

## **Appendix B**

### **FACE TO FACE FOLLOW UP INTERVIEWS ON FARMS**

1. What for you have been the major health issues you have faced while working in agriculture?

How did you address these health issues?

Did you experience any difficulties addressing these issues?

2. Have there been health issues faced by (fellow workers, owners, family members) that differ from your own. What were these? How were they addressed?

3. What are your major concerns as a worker in agriculture?

4. Can you describe for me what healthcare facilities are available in your locality?

5. What health care cannot be accessed in your locality?

Who would you call in an emergency?

6. What has been the main source of information on injury and disease – that you have been able to access in your time as an agricultural worker?

7. What are the main barriers that you have faced when attempting to address injury and disease on the farm?

How do you think these barriers can be removed?

8. How has addressing injury and disease on the farm been enhanced/assisted?

9. How do you think health – in particular injury and disease prevention can be improved in the agricultural sector?

10. Are there any changes that could be made immediately that would reduce risk of injury or disease on your property? What are they? What would stop these changes being made?