



An Australian Government Initiative



Collaborative Partnership for
FARMING AND FISHING
HEALTH AND SAFETY

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Rural Industries Research & Development Corporation

Safe Farming on Small Farms



MARCH 2013

RIRDC Publication No. 11/167



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Safe Farming on Small Farms

by John Temperley, Tony Lower, Emily Herde and John Curtis

March 2013

RIRDC Publication No 11/167
RIRDC Project No PRJ-005423

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ISBN 978-1-74254-344-4
ISSN 1440-6845

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Electronically published by RIRDC in March 2013
Print-on-demand by Union Offset Printing, Canberra at www.rirdc.gov.au
or phone 1300 634 313

Foreword

This project resulted from the identification of workplace health and safety (WHS) data associated with farming by the Commonwealth Department of Health and Ageing and the Collaborative Partnership for Farming and Fishing Health and Safety Program. The research is important as it provides a basis upon which to understand the WHS issues and challenges of small area farms and where further efforts and investment could most effectively be targeted.

The primary beneficiaries of this research are the small farm sector, research and funding providers. The information contained in this report provides information on the nature and scale of death and serious injury associated with small area farms in Australia. There could be as many as 600,000 small area farms with an estimated value of agricultural operations less than \$5,000, or who do not meet the threshold value to be classified as a primary producer. This group of lifestyle (hobby) and small area/scale farmers are not represented in the Australia farm morbidity and mortality statistics, but have appeared elsewhere in Australian injury epidemiological studies.

Examining the National Coroners Information System to extract farm related fatalities for the period 2001-2006, 57 (10.2%) of the 557 cases were identified to have occurred on small farms.

Nearly 44% of all deaths that occurred on small farms in Australia between 2001 and 2006 were older people aged 55 years and older. There were 12 (2%) children (<15 years) that died on small farms; the key risks are drowning and severe injury involving vehicles and horses.

A key understanding from this study is that small area farmers face similar hazards to that of larger scale farming operations. However, the level of knowledge within small area farmers regarding either their OHS obligations in law and on a practical level taking necessary action to control hazards, requires attention. In providing this type of information it was seen as important that it was short, written in plain English and had pictures illustrating practical controls.

Communication pathways to assist in the dissemination and uptake of relevant health and safety information were relatively informal for the small area farm respondents (e.g. other farmers and neighbours). Other mechanisms were also identified e.g. local grower markets, field days, commodity magazines, local councils / government (Catchment Management Authorities), stock and station agents. There was also support for some form of safety information clearinghouse, despite issues with internet connectivity.

This project was funded by the Collaborative Partnership for Farming and Fishing Health and Safety. This report, an addition to RIRDC's diverse range of over 2100 research publications, forms part of our Collaborative Partnership for Farming and Fishing Health and Safety Research and Development Program, which aims to improve the physical and mental health of farming and fishing workers and their families, and the safety environment and work practices in farming and fishing industries.

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Craig Burns
Managing Director
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About the Authors

The authors are researchers of the Australian Centre for Agricultural Health and Safety, a Centre of the University of Sydney. They have been involved in farm safety and health promotion through their work with the Farmsafe Australia network, and have undertaken applied research and development work to underpin their promotion and extension work.

Together they bring public health and health promotion, agricultural science and extension, practical on-farm experience, medical, occupational health and safety expertise to the study.

Acknowledgments

The contributions of over 500 respondents from small farm/ life style/ hobby farm enterprises throughout NSW, Queensland, Tasmania and Victoria has been pivotal to the conduct of this study and its results. Without this contribution including participating in workshops and completing surveys, the outstanding results presented would not have been possible. Our sincere thanks are expressed for their input.

The assistance of many people who work for Councils, Government Departments and Shires is acknowledged. Particular thanks are directed to Andrew Britten (Berry), Wendy Cameron (Mackay), Lachlan Milne (Kyneton), Simon Schweitzer (Bega), Beverley Steer (Bega) and Anne Taylor (Tasmania), in assisting to convene groups of small scale farmers appreciated. The importance of local knowledge and an understanding of the unique geographical and community issues impacting on these producers, cannot be overlooked. The assistance and work by university students employed (in particular Tim and Libby Sullivan) to conduct the surveys at field days, their persistence and professionalism was and is commendable.

We would also thank the Small Farm Safety Reference Group for their time, input and guidance throughout the project.

The Australian Centre for Agricultural Health and Safety received a grant from the Collaborative Partnership for Farming and Fishing Health and Safety to undertake the study.

Abbreviations

ACAHS	Australian Centre for Agricultural Health and Safety
OHS	Occupational Health and Safety
PPE	Personal protective equipment
PTO	Power Take Off
ROPS	Roll Over Protection Structure
CMAs	Catchment Management Authorities

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Executive Summary

What the report is about

This report is the first in-depth assessment of the health and safety knowledge and practices of small area farmers in Australia. The data will provide a basis upon which to develop relevant implementation approaches to assist the increasingly large number of small area farmers in improving their health and safety.

Who is the report targeted at?

Concerns have come from government and those involved with policy development that these farmers are not involved or represented and that small area farmers are not the target of mainstream farming safety programs. Consequently, this report is targeted at those agencies that have a role to play in enhancing the regulatory basis and/or active implementation of health and safety interventions.

Where are the relevant industries located in Australia?

Increasing numbers of small farms are emerging in peri-urban communities, as well as along coastal strips. The demographic trends supporting these population movements are well recognised in Australia. As such, the predominant focus of this study was on the growth strip along the eastern seaboard. Notwithstanding this, the factors driving such a demographic transition appear to be relatively consistent nationally.

Background

There are 140,704 farms in Australia with an Estimated Value of Agricultural Operations (EVAO) greater than \$5,000 per annum. Of these farms, there are 29,012 farms that are less than 50 ha.

It has been estimated that there could be as many as 600,000 small area farms with an EVAO less than \$5,000, or who do not meet the threshold value to be classified as a primary producer. These farmers very often do not employ permanent labour, but there is work conducted by family and/or by contractors.

These people face many hazards, including bodies of water (placing small children at increased risk of drowning), tractors without roll-over protection, unguarded farm machinery, farm motorbikes (including quad bikes) and animals (cattle, alpacas, sheep, goats and horses).

Death and severe injury sustained by this population, is not necessarily identified by the various state workplace health and safety authorities, nor identified as farm related (or farmer as an occupation), when presenting to hospital emergency departments for treatment.

This makes it difficult to collect death and injury data, preventing the development and engagement of small area farmers with evidence based safety and injury prevention programs.

Results

Injury Data

A total of 57 (~ 10%) of all non-intentional farm related injury deaths may have occurred on a small area farm based on data from the National Coroners Information System (2001-2006). Of the respondents in the workshops, 22 (~ 20%) reported that they had suffered an on-farm injury in the previous 12 months. These were predominantly soft tissue injuries with some fractures.

Workshops

Workshop data from the participants (n=102) indicated that:

- There were few barriers to safety in terms of cost, time and the complexity of actions
- Farm safety enhanced productivity
- Few had safety training
- There was a general acceptance of risk, to get the job done
- Induction for all employees and contractors was low (38%)
- One-third of workplaces did not conduct regular hazard inspections
- The vast majority did not have a farm safety business plan
- Less than 20% indicated that most risks could be managed through engineering approaches
- Most (89%) reported the presence of relevant personal protective equipment, 25% reported they always wore a helmet on quad bikes, two wheelers and horses, and just over half wore ear plugs/muffs when undertaking noisy work.

The desired format for farm safety material was one/two page brief summations which specifically address the hazards and identified clear solutions. A range of communication pathways were noted as being of importance most typically from other farmers and neighbours, with discussion at local farmer/grower markets featuring prominently. Other pathways of note were stock and station agents, contractors, agricultural field days and Catchment Management Authority representatives. While the internet was used to access resources, this was impeded by connectivity issues for many small area farmers.

Field Day Survey Data

Major findings of the survey (n=480) indicated that:

- Few had a farm safety plan
- One-third reported regularly undertaking hazard inspections
- A high rate of PPE (96%) was reported, with 57% indicating they wore a helmet when riding a quad bike
- For tractors almost 90% had a Roll Over Protection Structure
- Field days were the most common source of farm safety information (n=216), with others being agricultural newspaper (n=145), TV (n=89), farm supply outlets (n=72), internet (n=72), radio (n=63), WorkCover (n=58) and other industries e.g. mining (n=14).

Small Scale Horticulturalists

They faced a similar range of hazards to other producers, with OHS risks relating more to activity production rather than land size. Most frequently these producers obtain their OHS information from advisers, agronomists and other growers. Some of the niche markets within small scale horticulture are ethnically based and dominated by particular groups. As such, while mainstream material was seen to be relevant, English literacy is often raised an issue of concern and requires consideration in the development of any resource materials.

Implications

A key understanding from this study is that small area farmers face similar hazards to that of larger farming operations. However, the level of knowledge within small area farmers regarding their OHS obligations in law and also on a practical level in taking necessary action to control hazards, requires attention. In providing this type of information it was seen as important that it was short, written in plain English and had pictures illustrating practical controls.

Communication pathways to assist in the dissemination and uptake of relevant OHS information were relatively informal for the small area farm respondents (e.g. other farmers and neighbours). Other mechanisms were also identified e.g. local grower markets, field days, commodity magazines, local councils / government (Catchment Management Authorities), stock and station agents. There was also support for some form of information clearinghouse, despite issues with internet connectivity.

Further work is required to address the specific needs of small area horticulturalists, many of whom are from a diverse range of ethnic backgrounds.

In summary, the findings suggest that there remains significant scope to enhance the safety of small area farmers through improved information and adoption of known effective approaches.

Recommendations

The major recommendations are that:

1. The number of deaths, injuries and exposure to significant hazards demonstrates a need for further action to improve health and safety performance on small farms.
2. Future resource materials should be tailored based on the advice provided in this study by participants - that is, concise one/two page resources focusing on common high risk hazards and effective solutions.
3. Succinct information outlining OHS responsibilities required under the nationally harmonised legislation be developed for small scale farmers to ensure they are aware of their responsibilities.
4. A national clearinghouse for information relevant to farm health and safety is established that includes a specific component for small area farmers.
5. Support is provided to implement the draft communications plan for small area farmers developed in this study.
6. Further preliminary work is required with small area horticulturalists to document their knowledge and attitudes to health and safety risks. This should include addressing issues relating to pesticides use and may require specific language skills other than English.

1. Introduction

Farming worldwide is a hazardous occupation, with Australian data also reflecting this pattern. Significantly, non-intentional farm related injury deaths in Australia have declined in the past 20 years from an average of approximately 150 deaths per annum (1989 - 92) to an average of about 82 deaths per annum (2003-2006).¹ This has primarily been achieved through the investment made by government and agricultural industries in farm health and safety programs.

There are definitional issues around what a small farm is, however it is accepted that they fall on a continuum from rural residential through to small area primary producers. Some of these will be commercially oriented and others not. For the purposes of this study, people that self-identify as small area farmers were included in the study.

Globally, the literature is silent about the health and safety of people who live and work on small area farms (those farms where there may not be an expectation of the farm being a primary source of income). Burnley and Murphy (2005) examined and described the development of the peri-urban fringe, including movement of people from metropolitan to Arcadian Australia to live a utopian vision of agriculture (including lifestyle farming), or living in harmony with nature.²⁻⁴

There are no Australian reports providing information on the rates of death or injury on small area farms.⁵ There is also concern that this sector is not engaging with mainstream health and safety programs. This problem may be further exacerbated where English is a second language. Additionally, it is likely that small area farms face similar hazards to that of larger farm enterprises (tractors, quad bikes, farm vehicles, motorcycles, unguarded machinery, dams and bodies of water) and hence, need to be engaged in safety innovation and practice.

All Australian agriculture and horticulture businesses are required to comply with legislation regarding occupational health and safety, including those who farm small areas. Often, small area farmers have farm and business characteristics that make it necessary for farm safety business plans to be specifically tailored for this sector (e.g. niche livestock or crops).

There are many small farm characteristics that make it necessary for a program that has been specifically developed for this group. These include:

- Use of equipment and processes that are associated with high risk (e.g. quad bikes and tractors), although on a smaller scale
- Often having a limited workforce, however they may employ large volumes of workers at specific times
- Often supply a niche market and may benefit from participation in an approved safety program that is easily adaptable and succinct
- May lack the time, money and expertise required to set up an effective safety program
- May not view themselves as needing to comply with legislation

Concerns have come from government and those involved with policy development that these farmers are not involved (or have not been involved) or represented, and that small area farmers are not the target of mainstream farming programs. Farmers of small area holdings are likely to be exposed to similar hazards and risks as those of larger farms, however to what degree is not known.

Currently in Australia there are 140,704 farms in Australia with an EVAO greater than \$5,000 per annum. Of these farms, there are 29,012 farms that are less than 50 ha.⁶ It has been estimated that there could be as many as 600,000 small area farms with an EVAO less than \$5,000, or who do not meet the threshold value to be classified as a primary producer. These farmers very often do not employ PAYG labour, but there is work being conducted by family and/ or by contract work.⁷

These people face many hazards, including bodies of water (placing small children at increased risk of drowning), tractors without roll-over protection, unguarded farm machinery, farm motorbikes (including quad bikes) and horses.

Death and severe injury sustained by this population (and sector of farming), is not identified by the various State Workplace Health and Safety Authorities. These injuries are generally not denoted as farm related (or occupationally coded as a farmer), when presenting to hospital emergency departments for treatment. This makes it difficult to collect death and injury data and has prevented the development and engagement of small area farmers with evidence based safety and injury prevention programs.

This project will provide data to identify ways to engage small scale farmers in improving health and safety.

2. Objectives

The objectives are to:

1. gain knowledge of the number, size and scale of the Australian small farms (including market gardening and lifestyle sector) and the hazards and risks faced by these farmers
2. identify communication pathways that are effective to engage the lifestyle sector in farm safety
3. identify resources and produce guidance material for the small farm sector to manage the hazards and risks associated with agricultural production
4. improve knowledge and awareness of small farm farmers of the high risk hazards they face in their farming lives
5. complete a formative assessment of the health and safety needs of commercial market gardeners through discussions with representatives from the relevant State Departments of Primary Industry.

3. Methodology

The study consisted of several separate but inter-related components.

1. Mobilise a Reference Group to oversee and provide advice on the running of the project. The group included key stakeholders from the small farms network, plus state Departments' of Primary Industry representatives.
2. In association with the National Farm Injury Data Centre, undertake an investigation of the current limited data, including data from the National Coronial Information System database (NCIS), hospital Emergency Department Information Systems (EDIS) and NSW Health Outcomes Information Statistical Toolkit (HOIST), to collect available information relating to injury illness and death on small farms.
3. Host a series of workshops of farmers and local key informants from small area farms (lifestyle farmers) in the eastern states. Particular attention was taken to ensure that small area farmers from a variety of localities were represented. The workshops targeted around 100 small area farmers, producing a variety of commodities.

Inclusion criteria included:

- Agricultural production is not their primary source of income
- English speaking
- Age - 18 years and over

Participating lifestyle farmers had their current safety systems surveyed against benchmarked high risk hazards and safety standards. This allowed them not only to identify areas of need but also to see how they are performing relative to others who operate small farms.

A thematic analysis of the workshop data was completed describing the knowledge and attitudes of small size farmers in relation to safety.^{8,9} It also identified the sources of information and optimal communication access pathways for this group.

4. Small farm field day survey data were collected at Hawkesbury (NSW), Launceston (Tas), Murrumbateman (NSW), Tocal (NSW) and Seymour (Vic).
5. A consultation meeting with state Departments' of Primary Industry and other key representatives that have existing linkages with market gardeners, was conducted. This meeting sort to ascertain the current status of health and safety knowledge, systems and practices of market gardeners. Information derived from the meeting and discussions will be used to inform further project work directly with market gardeners, on health and safety.
6. Develop a communication strategy under the guidance of the Reference Group to promote the resources and information using a range of extension strategies in a second phase. It is anticipated that this will include promotion via the existing network of Small Farm Field Days around Australia, as well as other avenues identified by participating farmers.
7. Produce an evaluation report and paper for publication in a peer-reviewed journal describing knowledge and attitudes of small area farmers in relation to safety, and describing the sources of information and optimal communication access pathways for this group.

Ethics approval for the study was obtained through the University of Sydney Human Research Ethics Committee (Approval No. 12909).

4. Results

4.1 National Farm Injury Data Centre

The Small Farms Dataset Australia (2001-2006) was a component of a larger study of all on-farm fatality in Australia. The National Farm Injury Data Centre (NFIDC) used the internet based National Coroners Information System (NCIS) to extract farm related fatalities for the period 2001-2006. The method of extraction was laborious, involving several data sweeps, and is not without its limitations. The 557 cases within the 2001-2006 dataset were then reviewed with a focus on occupation and location of death, combined with key word searches (such as hobby farm, hobby farmer, part time farmer, market gardener etc.) to ascertain whether the case occurred on a small farm.

Through exploration of NCIS coding, police documents and coroners reports it could be ascertained that 16 cases of the 557 reviewed “definitely” occurred on a small farm or hobby farm. A total of 10% (57 of the 557 cases) “possibly” occurred on a small farm or hobby farm although it was not stated specifically within the NCIS coding or attached NCIS documents. Summary information of these cases is presented in Tables 1 – 5.

Table 1: Number of injury deaths on small farms, Australia 2001-2006

Year	Work-related Deaths	Non-work related Deaths	Total Deaths incl. Other or Unknown Status
2001	0	5	5
2002	0	3	3
2003	2	7	9
2004	1	9	11
2005	6	5	11
2006	3	13	18
TOTAL	12	42	57

Table 2: Non-intentional injury deaths on small farms by state, Australia 2001-2006

	2001	2002	2003	2004	2005	2006	TOTAL
New South Wales	2		4	2	2	1	<i>11</i>
Northern Territory							<i>0</i>
Queensland	2	1	3	6	5	7	<i>24</i>
South Australia					1	3	<i>4</i>
Tasmania		1			1	1	<i>3</i>
Victoria	1	1	2	2	2	6	<i>14</i>
Western Australia				1			<i>1</i>
TOTAL	5	3	9	11	11	18	57

Table 3: Number of deaths on small farms by age group and gender, Australia 2001-2006

	Male	Female	Total	%
<15yrs	11	3	14	24.6
15-54yrs	14	4	18	31.6
>55yrs	21	4	25	43.9

Agents of on-farm deaths of children, Australian Small Farms 2001-2006 (n=14)

The leading causes of unintentional injury deaths of children (<15yrs) on small farms are:

- Dam drowning 6
- Drowning in other farm structures 3
- Horses 2
- Farm Vehicle 1
- Quad Bike 1
- Forklift 1

Agents of on-farm deaths of adults, Australian Small Farms 2001-2006 (n=43)

The agents associated with on-farm non-intentional injury deaths of persons aged 15 years and over on small farms are shown in Table 4. The leading causes of death for this group from 2001-2006 are:

- Tractors 11
- Vehicles 9
- Farm Structures 6
- Working Environment 6

Table 4: Agent of farm injury deaths for persons aged 15 years and over, Australian 2001-2006

CATEGORY	AGENT	No.
Farm Vehicle	Car	1
	Farm Vehicle other NEC	3
	Motorcycle 2 Wheel	2
	Motorcycle 4 Wheel	2
	Utility	1
<i>Subtotal</i>		9
Mobile Farm Machinery/ Plant	Earth Moving Equipment	1
	Forklift	1
	Ride-on Lawnmower	2
	Slasher	2
	Tractor	11
<i>Subtotal</i>		17
Powered Implements	Chainsaw	1
<i>Subtotal</i>		1
Farm Structure	Dam	3
	Machinery Shed	1
	Tank	2
<i>Subtotal</i>		6
Animal	Cattle	3
	Horse	1
<i>Subtotal</i>		4
Working Environment	Fire / Smoke / Flame	1
	Tree, Stick branch	2
	Trees being felled	3
<i>Subtotal</i>		6
TOTAL		43

Agents of on-farm deaths of older people, Australian Small Farms 2001-2006 (n=25)

Nearly 44% of all deaths that occurred on small farms in Australia between 2001 and 2006 were to people aged 55 years and older. The leading causes of death are:

- Tractors 7
- Farm Vehicles 4
- Working Environment 4
- Farm Structures 4

Table 5: Agent of farm injury deaths for persons aged 55 years and over, Australian 2001-2006

CATEGORY	AGENT	NO.
Farm Vehicle	Farm Vehicle other NEC	1
	Motorcycle 4 Wheel	2
	Utility	1
<i>Subtotal</i>		4
Mobile Farm Machinery/ Plant	Earth Moving Equipment	1
	Ride-on Lawnmower	2
	Tractor	7
<i>Subtotal</i>		10
Powered Implements	Chainsaw	1
<i>Subtotal</i>		1
Farm Structure	Dam	2
	Tank	2
<i>Subtotal</i>		4
Animal	Cattle	2
<i>Subtotal</i>		2
Working Environment	Fire / Smoke / Flame	1
	Tree, Stick branch	1
	Trees being felled	2
<i>Subtotal</i>		4
TOTAL		25

4.2 Non-fatal Injury Data

Attempts were made to access injury related information that related to potential small area farm cases through hospital separation data via the NSW Health Outcomes Information Statistical Toolkit (HOIST). However, while some farm injuries can be identified from these data sources, it is currently impossible to link these data to a small area farm. Consequently, other than the self-reported injury data collected in the workshops (tables 6-19), adequate and valid data on injury for small area farmers were unable to be obtained.

4.3 Workshops

4.3.1 Sample

Workshops were arranged with key local contacts in each of the areas. Recruitment to the workshop was initially purposive in nature, with all individuals being provided a participant information sheet and consent forms, as per ethics requirements. Overall, there were 102 participants involved in the eight workshops with 59% being male. Most were aged 55-60 years (33%), 60+ years (30%) or 45-49 years (21%). Workshops were conducted in Bega, Berry, Warragul, Kyneton, Hastings, Longford, Lalla and Mackay. Many of the respondents continue to hold down mainstream employment, with many reporting that they were “time poor”.

4.3.2 Benchmark data

Following a preliminary summary of the intention of the workshops, participants were requested to complete a short benchmarking instrument that assessed their own properties in relation to safety climate, safety management, control of major safety hazards, changes in safety practice and injury experience. The instrument had previously been used in a study of commercial farm enterprises.¹⁰

Safety Climate

Safety Climate questions consisted of four components - personal motivation for safety, positive safety practice, risk justification, fatalism and optimism.

Personal Motivation for Safety on Farms

Cost, time and the complexity of actions were generally perceived not to be barriers to farm safety. Further, only a small minority felt that farm safety did not enhance productivity and make employees more responsible.

Table 6: Proportion (%) of valid responses assessing safety climate - personal motivation for safety on farms

<i>A. Personal Motivation for Safety on Farms</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
1. It costs too much to be committed to farm safety	1	21	74	4
2. It takes too much time out from work to be committed to farm safety	1	16	81	2
3. Farm safety is too difficult and complicated for us to tackle	2	8	86	4
4. Farm safety improves farm productivity	38	45	8	8
5. Farm safety helps employees become more responsible in their work	64	23	6	7

Positive Safety Practice

Only 20% provided what may be termed comprehensive safety training, despite most having a heavy reliance on work practices as a control approach. Significantly, only one-third reported that everybody works safely on the farm.

Table 7: Proportion (%) of valid responses assessing safety climate - positive safety practice

<i>B. Positive Safety Practice</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
6. We provide adequate safety training for workers on our farm	20	45	29	6
7. The effectiveness of farm safety lies mainly with our workers	29	41	26	4
8. Managing safety on our farm is as important as profit	71	14	11	4
9. Everybody works safely on our farm	33	48	9	10
10. The owners, managers and/or partners all play a part in farm safety	83	13	4	0

Risk Justification

The safety of machinery was identified as an issue for almost half of respondents. Of importance was the perception that risks were required to get the job done, with 42% of respondents admitting to having done this to some extent, similarly nearly one-quarter worked on machinery without an appropriate guard at some stage.

Table 8: Proportion (%) of valid responses assessing safety climate - risk justification

<i>C. Risk Justification</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
11. I have not worked safely because machinery was not fitted with the right safety features	9	30	56	5
12. I have not worked safely because I didn't know the risks involved at the time	5	11	80	4
13. I have not worked safely because safety was not part of my farm training or upbringing.	5	11	80	4
14. I have not worked safely because I needed to get the job done quickly	10	32	56	2
15. I have not worked safely because replacing the guard was a hassle	3	21	73	3

Fatalism and Optimism

Over 60% of respondents reported that they had to take risks to get the job done, with a significant proportion suggesting that not all accidents were preventable.

Table 9: Proportion (%) of valid responses assessing safety climate - fatalism and optimism

<i>D. Fatalism and Optimism</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
16. If I worried about safety all the time I would not get my job done	7	27	63	3
17. I cannot avoid taking risks in my job	19	42	35	4
18. Accidents will happen no matter what I do	6	40	51	3
19. Not all accidents are preventable, some people are just unlucky	18	38	38	6
20. People who work to safety procedures will always be safe	8	53	32	7

Safety Management

The Safety Management questions were broken into several components – engagement, hazard and risk assessment, plans and action, safety information and training, monitoring and recording.

Engagement

In general terms, most reported that they allocate at least some resources to safety (81%), most know their safety responsibilities (92%), many of those with employees provide inductions before hazardous jobs (84%) and all those involved in farm work are somewhat engaged in safety (62%). Less well

developed were recognition of safety responsibilities in duty statement (36%), induction for all employees and contractors (38%), safety on agenda of meetings with employees (31%) and training in risk management (33%).

Table 10: Proportion (%) of valid responses assessing safety management – engagement

<i>A. Engagement</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
1. This farm allocates resources to safety	35	46	13	5
2. All individuals who work on the farm know their responsibilities for safety	49	43	5	3
3. Safety responsibilities of the business partners and managers are clearly defined and understood	36	41	18	5
4. Safety responsibilities of employees are included in duty statements	20	16	55	9
5. Responsibility for supervision of safe work is specified	20	14	45	9
6. All employees AND contractors receive safety induction before starting work	14	24	60	1
7. All employees receive safety induction to all hazardous jobs before starting that job on the farm	33	51	3	13
8. All those who work on the farm are actively involved in the farm's safety program	31	31	36	1
9. Safety is on the agenda of regular meetings held between employer and employees	4	27	66	3
10. Training has been undertaken for all current workers in safety risk management	6	27	64	3

Hazard and Risk Assessment

Overall, while recognition of hazards and hazardous situations is relatively high, one-third of workplaces did not conduct regular hazard inspections and 41% did not complete assessments before seasonal activities.

Table 11: Proportion (%) of valid responses assessing safety management - hazard and risk assessment

<i>B. Hazard and Risk Assessment</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
11. All those who work on the farm actively report unsafe situations and unsafe acts to the employer or manager of the workplace	38	45	15	1
12. Action is taken following all reports of unsafe situations and unsafe acts reported	62	30	8	0
13. Regular hazard inspections are undertaken for all parts of the farm workplace	32	32	32	4
14. Hazard inspections are scheduled for ensuring the safety of workers before key seasonal activity begins	20	37	41	2
15. Safety risk assessment is a key part of the investigation of all new equipment for the farm	45	34	17	4

Plans and Action

Over three-quarters did not have a farm safety business plan and over one-third relied on safety rules (a low order approach in the hierarchy of controls), to manage risk. This is reinforced by the fact that less than 20% indicated that most risks could be managed through engineering (higher order) approaches.

While most (89%) reported the presence of relevant Personal Protective Equipment (PPE), only 25% reported they always wore a helmet on quad bikes, two wheelers and horses, and just over half wore ear plugs/muffs when undertaking noisy work. Overall, 20% also reported that awareness of emergency procedures for the property are known by those that work on the farm.

Table 12: Proportion (%) of valid responses assessing safety management - plans and action

<i>C. Plans and Action</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
16. A farm safety business plan is in operation with clear timelines and budget	4	17	77	2
17. Short term and long term plans are included in the action plan	7	14	74	5
18. Safety risks on the farm are not managed primarily by safety rules for doing the job safely	15	34	37	13
19. Engineering solutions can mostly be found to manage safety risk	19	42	27	11
20. There are safety rules for keeping guards in place and in good condition	52	29	15	4
21. The personal protective equipment (PPE) that is necessary for safe work is available for all relevant jobs on the farm	65	24	9	2
22. Helmets are always worn when any worker rides the ATV, farm motorcycle or horse	25	29	43	2
23. Ear muffs or plugs are always worn in the workshops when noisy work is being done	56	26	14	4
24. All family members, workers and contractors are aware of the emergency arrangements on the farm, including phone numbers	58	20	20	2
25. Arrangements for regular communication between farmers and workers during the day are in place	44	25	26	5

Safety Information and Training

Over one-third of respondents reported that relevant information is not available for all hazardous jobs, with a similar proportion indicating training had not been undertaken, including for those working with pesticides, quad bikes and motorcycles.

Table 13: Proportion (%) of valid responses assessing safety management - safety information and training

<i>D. Safety Information and Training</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
26. Safety information is available for all hazardous jobs on the farm	29	31	34	6
27. All workers can access the Operators Manual for all plant and equipment in use on the farm	50	24	24	2
28. Relevant safety training has been provided for all workers	26	39	30	5
29. Training has been undertaken by all workers engaged in pesticides application	44	19	26	11
30. Training has been undertaken by all current workers in safe ATV, motorcycle and tractor operation	27	30	37	6

Monitoring and Recording

In general terms, overall record keeping was poor, even in areas required by law such as risk assessments, pesticide storage / use and induction for workers and contractors.

Table 14: Proportion (%) of valid responses assessing safety management - monitoring and recording

<i>E. Monitoring and Recording</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
31. Day-to-day records of reports of unsafe situations and unsafe acts are kept for planning action	8	13	74	4
32. Up-to-date records are available of pesticides held and used on the farm	38	21	37	4
33. Up-to-date records of worker and contractor safety induction are available	7	14	73	6
34. Up-to-date records of machine and equipment maintenance are available	33	25	39	3
35. Records of injury and near-miss accidents are kept and used to plan safer systems of work.	9	23	64	3

Control of Major Safety Hazards

Farm Machinery and Equipment Safety

Three-quarters of tractors were fitted with a ROPS, with fewer having a PTO master guard and shaft guard on implements. For those with grain augers (n=27), under half reported that they were effectively guarded.

Table 15: Proportion (%) of valid responses assessing control of hazards - farm machinery and equipment safety

<i>A. Farm Machinery and Equipment Safety</i>	<i>Yes</i>	<i>No</i>	<i>Not sure</i>
1. All tractors on the farm are fitted with a ROPS that meets Australian standards	74	16	10
2. How many tractors are in operation on the farm?	(Total n = 103)		
3. How many are fitted with a ROPS that meets Australian standards?	(72% fitted)		
4. All tractors on the farm are fitted with a tractor PTO master guard	67	24	9
5. How many are fitted with an undamaged tractor PTO master guard?	(41% fitted)		
6. All PTO shafts on tractor powered equipment are protected by an undamaged PTO shaft guard	63	25	12
7. How many PTO powered items of equipment are in use on the farm?	(Total n=135)		
8. How many are fitted with undamaged PTO shaft guards?	(71% guarded)		
9. Bench grinders in the farm workshop are all fitted with undamaged guards	70	20	10
10. Intakes of all grain augers are effectively guarded so that hands or feet cannot be caught in the flight	44	29	26

Farm Structures

Only just over half of respondents had a Residual Current Device (RCD) fitted to the workshop and a locked chemical store. Less than half had a secure area for young children (< 5 years) and while silos were not common in this sample (n=31), very few had systems in place to prevent falls. Most had no set speed limits.

Table 16: Proportion (%) of valid responses assessing control of hazards - farm structures

<i>B. Farm Structures</i>	<i>Yes</i>	<i>No</i>	<i>Not sure</i>
11. An Residual Current Device is fitted into the electrical system of the farm workshop	58	26	16
12. Chemicals are stored in a separate locked area of the farm workplace, with access only by designated people	52	44	4
13. There is a securely fenced and gated play area around the home to protect children from injury in the farm workplace	45	53	2
14. All silos have systems that effectively prevent injury from falling from a height	13	68	19
15. Roads that are used by farm and contractor vehicles are in safe condition have set speed limits	36	61	3

Farm Safety Practice

Approximately half of all respondents reported use of seat belts on farm, use of helmets when riding quad bikes, motorcycles and horses, plus use of PPE when handling pesticides and using chainsaws. Hearing protection is worn by two-thirds of respondents and most (78%) wear goggles when grinding.

Table 17: Proportion (%) of valid responses assessing control of hazards – farm safety practice

<i>C. Farm Safety Practice</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
16. It is an established and accepted rule that all adults and children must be properly restrained in any vehicle on the farm.	57	23	19	1
17. It is an established and accepted rule that no adult or child is to ride an ATV, motorcycle or horse without wearing a correctly fitted helmet	50	23	27	0
18. People handling pesticides on the farm always wear the PPE advised on the label	52	33	14	1
19. Ear muffs or plugs are always worn by workers and others when noisy work is undertaken in the workshop	64	24	7	5
20. Eye goggles are always used by people using grinders in the workshop	78	14	3	4

Changes in Safety Practice

Participants reported a range of changes that they have undertaken in the last 12 months, several were repeated by different participants. The most common were the purchase of some form of PPE (n=6), signage (n=5), electrical work (n=4), improvements to stock yards (n=3) and construction of a safe play area or fencing off a dam close to the farm house (n=3). One person also fitted a ROPS and another had completed a farm audit, this was prompted by several deaths over recent years within a 25km radius of the property. Some of the other actions were prompted by an injury that had been incurred as a result of the hazard.

Induction for those that employed staff and/or contractors was poor and is an area that requires considerable improvement.

Injury Experience

In total, 22 participants had reported an injury, with 15 (68%) of these being to males. The most common injuries related to animals (n=7 - alpacas, horses), mobile plant (n=3 - augers, wood splitter, post driver) and slips/falls (n=2). The nature of the injuries reported were overwhelmingly soft tissue injuries, including penetrating wounds. There were also some fractures. While the small sample size of respondents limits interpretation, these data suggest that just over 20% of the participants had incurred some form of injury in undertaking task on their small area farm in the past 12 months.

4.3.3 Communication Pathways

Results indicated that information is received from a wide range of sources. Most typically information was transferred from other farmers and neighbours, with discussion at local farmer/grower markets featuring prominently. In one instance, a well organised group met regularly at a local refuse tip for coffee and part of the scavenging process was a sharing of ideas and thoughts that included safety.

Other potential information dissemination networks included stock and station agents, contractors, Catchment Management Authority representatives, local council rate notices, major agricultural papers, livestock health and pest authority notices, rural suppliers (Elders, CRT, Landmark etc.) and commodity specific small farm magazines (e.g. alpacas, olives). Relatively little information was obtained from state Work Health Authorities or Departments of Agriculture/ Primary Industries.

Many of the respondents in the workshops deliberately “chose” not to know and/or seek out information as they perceived their scale of operations (unlike larger commercial properties), did not warrant such attention. This was reinforced by the relative lack of media coverage relating to OHS related fatalities in the media, which meant that the OHS profile was relatively low. This is an important finding as by their very presence at a workshop such as this, which was promoted based on OHS content, it could be expected that these attendees may indeed be more favourably exposed to such OHS messages than those that did not voluntarily participate.

An important and somewhat surprising finding was that most tended not to use the internet to identify farm OHS resource material, however they felt it would be useful if all of this information could be located at one site. This was often a function of three factors, slow download speeds, a lack of familiarity with information technology and the complicated nature of many resource materials. In relation to this last factor, it was clearly evident that what is wanted are short one-two page statements that covered the major points in respect to hazards and solutions (preferably with pictures to add context to the actions required).

The perception of these small area farmers was that they wanted to be described based on the commodity sector to which they were involved e.g. sheep, beef, alpaca, grains producers. One proposition was to commence a weekly / monthly insert into relevant magazines so that growers could rip it out and develop a small library resource of important OHS information in an easy to read and digestible format.

4.4 Field day survey data

At the five field days, intercept surveys were completed with a total of 480 field days attendees. From this sample of respondents the following data were obtained relating to safety management systems, control of major hazards and communication pathways.

4.4.1 Safety Management Systems

Results are provided in table 18 and illustrate that at least two-thirds of respondents did not have a farm safety plan. While a similar proportion undertook at least some hazard inspections, only one-third reported that this was regularly done. On a positive note safety was a consideration for most when purchasing new equipment and the vast majority (96%) had at least some relevant PPE.

Table 18: Proportion (%) of valid field day survey responses - safety management systems

<i>A. Enterprise safety management systems</i>	<i>Yes</i>	<i>To some extent</i>	<i>No</i>	<i>Not sure</i>
1. Does your farm have a written farm safety plan?	13	21	65	1
2. Are regular hazard inspections undertaken on the farm (e.g. tractor, machinery, workshop etc.)?	37	40	21	2
3. When buying new equipment, is safety a key factor in your decisions?	53	34	11	2
4. Is relevant Personal Protective Equipment available for all jobs on your farm (including hearing protection and PPE to prevent chemical exposure)?	70	26	3	1

4.4.2 Control of Major Safety Hazards

Overall, tractors were present on 353 farms. On these properties there were a total of 711 tractors, with 637 of these (89.6%) being fitted with an Australian Standards Approved ROPS. Covered PTO master guards were present on 542 of these tractors (76.2%).

Table 19: Proportion (%) of valid field day survey responses - control of major safety hazards

<i>B. Control of major safety hazards</i>	<i>Yes</i>	<i>No</i>	<i>NA</i>
5. Are all tractor PTOs protected by an undamaged PTO guard?	70	30	-
6. Do you have a quad bike on the farm?	52	48	-
7. Does your farmhouse have a securely fenced and gated play area to protect children from drowning and injury in the workplace?	70	25	5
8. Is it an accepted rule and practice that a helmet is always worn on:			
Horses?	74	26	-
Motorcycles?	69	31	-
Quad bikes?	57	43	-

4.4.3 Communication Pathways

A total of 76% of respondents reported that they received farm safety information. Of these, the most common means of obtaining information was from field days (n=216), agricultural newspaper (n=145), TV (n=89), farm supply outlets (n=72), internet (n=72), radio (n=63), Work Health and Safety Authorities (n=58) and other industries e.g. mining (n=14).

4.5 Market Gardener Formative Assessment

A meeting of key stakeholders that have significant interaction with commercial small scale horticultural producers (market gardeners) in the immediate surrounds of Brisbane, Melbourne and Sydney was conducted. The focus of the meeting was to identify relevant health and safety issues that impact on these producers and to complete a formative assessment of the information they are likely to require and relevant communication channels.

Initial discussion focused on the definition of market gardeners, with the consensus of the meeting being that they are better termed small scale horticulturalists. For this group it was clear that they faced a similar range of hazards to larger producers and that the OHS risks relate to activity production rather than land size. Most frequently, these producers obtain their OHS information from advisers, agronomists and other growers. Some of the niche markets within small scale horticulture are ethnically based and dominated by particular groups. As such, while mainstream material was seen to be relevant, English literacy is often an issue of concern and requires consideration in the development of any resource materials. From a positive perspective, the often close inter-linkages based on ethnicity among producers of specific crops, may actually facilitate the dispersion of relevant OHS information.

4.6 Communication Strategy

As a lead Australian farm health and safety research organisation, the Australian Centre for Agricultural Health and Safety at the University of Sydney plays a major role in researching and promoting farm safety across the farming sector in Australia.

The purpose of this communication plan is to provide an integrated and evidence based approach for industry to communicate key safety issues to the small area farm sector across Australia.

Background

Currently, ACAHS is the operations centre for Farmsafe Australia and communicates farm safety through the publication of reports, scientific papers, safety guides and the development and publication of resources for farmers to manage health and safety on their farms, within contemporary state OHS law and standards.

ACAHS was funded by RIRDC to examine the health and safety of farmers on small area (scale) farms and to develop a communication plan for this farm sector.

This research sought small scale farmers' views and insights on a range of issues, including about where they currently get their farm safety information, who they see as providers (or potential providers) of farm safety information and how they could get that information in the future.

Participants in this research have been used to develop this communication strategy (summarised in Appendix 1) that better targets small area farmers.

Key findings

The small area farm safety workshops explored the following issues around farm health and safety:

- awareness of and experience with farm safety
- identifying hazards and high risk on small area farms
- perspectives and roles managing hazards and risk on small farms
- current farm safety communication and engagement of this farming sector, and
- future safety communication and engagement.

Participant's reported experiences that were not inconsistent across many small area farms, nor dissimilar/ inconsistent to larger farming business. These included:

- death and serious injury associated with motorbikes and quad bikes
- drowning in farm swimming pools and dams
- injury associated with tractor use from runover and rollover of tractors and lawnmowers
- injury associated with the use of chainsaws, felling trees and cutting firewood, and
- concerns about the effects from exposure to farm chemicals.

Communication goals

Primary goal

To improve farm safety on small area farms in Australia by communicating factors (key hazards and risks) that contribute to death and severe injury accidents on small farms.

This will be achieved by enhancing the small farming industry's awareness, attitudes and behaviour concerning farm safety in Australia.

Secondary goals

Strengthening RIRDC/ ACAHS/ Farmsafe Australia's capacity and profile as a communicator of farm safety issues to small area farms.

Strengthening ACAHS/ Farmsafe Australia/ RIRDC / Farmer member and farm commodity profiles in the small area farm sector.

Objectives

The following objectives support the goals of this strategy. These objectives will need to be measured in the future.

- ACAHS/ Farmsafe/ RIRDC communications are received and understood by the small area farmers.
- Small area farmers believe ACAHS/ Farmsafe/ RIRDC safety messages are useful and relevant and can be applied to their farming operations.

- ACAHS/ Farmsafe/ RIRDC communications contribute to overall awareness of farm safety issues to all small area farm sectors (rural residential, lifestyle/ hobby, small scale farmers).
- Communication contributes to positive attitudes towards all farm safety issues.
- Communication contributes to positive behaviours surrounding farm safety.

Target audiences

The following audiences will be targeted as part of this communication plan. Each audience group is segmented into the particular role they play within the farming industry. These audiences, along with their relationship with ACAHS/ Farmsafe/ Farmer organisation/ Commodity groups have preferred communication channels.

Small Area Farmers

Overall, small area farmers reported safety was important, had a consistent interest in safety and expressed an interest in receiving safety messages and information. However, the type of safety information of interest and the sources used to get this information varied significantly based on personal relevance.

For the purpose of this strategy, the audiences can be broken down into four subgroups that may or may not be mutually exclusive:

- rural residential
- lifestyle (hobby) farmers
- small scale horticultural farmers, and
- small scale primary producers.

Strategic approach

This plan uses the findings and analysis from the small area farm safety research workshops conducted in NSW, Tasmania and Victoria as a primary basis for this strategic approach.

This includes the following:

Expanding the farm safety support base

Based on the small area farm safety workshops, it is important to involve and maintain interested small area farmers as key stakeholders in implementing this communication plan because they generally have positive perceptions of farm safety.

However, there were some participants who wanted their rural residential/ lifestyle farms to be an 'OHS free zone', but still considered safety to be important and expressed a desire to work safely.

Participants indicated that improved safety performance is most likely achieved by having up to date machinery and could be backed up with safety information that they could use to modify current work practices.

Online communication

Participants in the small area farm safety workshops reported that they do not currently commonly use the internet to obtain farm safety information, primarily due to slow internet speeds, large document sizes, farm safety resources that were scattered over many sites and that sometimes resources were not seen as relevant to their farm or farm commodity. Small area farmers identified the web as an important aspect in future communication that could be used to communicate farm safety information. Small area farmers commonly identified themselves by the commodity they produced rather than by scale or size of their operation. Online communications (e.g. safety guides, safety alerts and an online newsletter), could be developed to deliver farm safety to these target audiences.

Greater presence at industry events, field days and farmer's markets

A greater emphasis will also be placed on providing preventative farm safety data, analysis and information to small area farmers at industry and commodity events such as seminars, annual conferences and promotion of safety through commodity networks. This will allow the farm safety network to connect and provide relevant information to the harder-to-reach groups, e.g. ethnic based grower groups.

Utilising social networks

Participants at the small area farm safety workshops identified other social networks as important for communication and sharing ideas, these included training days, farm seminars, field days, farmers and grower markets.

Targeted approach

ACAHS/ RIRDC/ Farmsafe Australia should take a more targeted approach communicating with small area farmers to ensure safety messages are relevant and useful. Communications will be explicitly targeted at particular roles (e.g. sheep, beef, goat, alpaca, herb production) to promote a more effective reach.

Promoting safety and awareness

ACAHS/ RIRDC/ Farmsafe Australia should engage in safety and awareness programs to promote the key safety messages to small area and lifestyle farmers about key hazards identified by the NFIDC research reports in the small area farm safety report. These messages will involve a mix of communication activities.

Appendix A lists the activities to achieve the goals of this plan.

Tracking and evaluation (measuring success)

To evaluate the success of this communication plan, the farm industry should continue to conduct research with stakeholders. The findings of this research will form the benchmark for measuring the effectiveness of communications.

ACAHS/ RIRDC/ Farmsafe should also periodically conduct farm safety surveys and seek feedback throughout the year to track farmer's perceptions toward specific communications initiatives/ messages.

Implications

This study is the first in-depth assessment of the health and safety knowledge and practices of small area farmers in Australia. Implications arising from the information gathered provide a platform from which to commence development of targeted approaches to assist this group in improving their health and safety. For the purposes of this section of the report, implications are discussed in relation to each of the study objectives.

4.7 Small Farms in Australia

There is no universally accepted definition of what indeed constitutes a small area farm in Australia and hence this has made identification of such farms problematic. On one hand, some farms such as those used for “lifestyle purposes” seem to fit into this description well. Some government authorities have also proposed that any property under 40 hectares is a small rural landholding, with others having mapped these farms in their local government area to identify specific issues that arise with these farms in relation to provision of services. However, the commercial orientation of such properties also needs to be viewed as part of this issue, as small area horticulture producers (market gardeners) or others involved in intensive crop production, may only have small land size but turnover large cash flows. As such, there are very limited data around the prevalence, size and placement of small area farms in Australia.

The perception of these small area farmers was that they wanted to be described based on the commodity sector in which they were involved e.g. sheep, beef, alpaca, grains producers. Not surprisingly the majority do not employ staff, with most work being undertaken personally, through family, neighbours and contractors. In part, many small area producers had the notion that OHS requirements did not apply to them as the scale of their operations were so small. Contractors were often used as a way to not only bring in specific expertise, but also to manage OHS risk. In general, most respondents had little to no concept of their obligations for OHS in respect to contractors, with most simply thinking that all OHS responsibility was transferred to the contractor e.g. lack of safety induction. Clearly, this exposes these producers to considerable legal risk, which will be further heightened under the nationally harmonised Workplace Health and Safety framework to take effect January 1, 2012.¹¹ In effect anyone that undertakes work on a small area farm, irrespective of whether they are an employee, contractor or visitor, will be required to meet obligations under the legislation.

A key understanding from the study is that small area farmers face similar hazards to that of larger operations, however exposure may vary depending on the commercial orientation of the farm. While deaths of small area farmers were identified, the data available to reflect morbidity is currently not available. Irrespective of this, the self-reported injury data from the workshop participants indicated that almost a quarter had incurred a farm injury in the previous 12 months. The list of common hazards includes plant, workshops, livestock, electrical, chainsaws and pesticides etc. However, it was noted from an anecdotal perspective that respondents working with livestock appeared to have a slightly better “mindset” in relation to OHS than did those involved in small horticultural operations. It is possible that this may be a result of the greater perceived risk from livestock.

When discussing OHS control measures, there was a tendency to jump to lower-order approaches within the hierarchy of controls e.g. use of PPE, safe work practices and training. This may be reflective of a lack of knowledge about potential higher-order approaches to control risk.

4.8 Communication Pathways

Results indicated that information is received from a wide range of sources. In general, communication pathways for OHS information were relatively informal for the respondents (e.g. other farmers and neighbours). Other mechanisms were also identified including small area farmer commodity magazines, stock/breed society groups, stock and station agents, contractors and Catchment Management Authority representatives. While some did use internet resources, this was restricted by connectivity issues for many small area farmers. An important omission as a reference point for health and safety information was the lack of input from those already working in the respective state Departments of Agriculture/Primary Industries.

The diversity in information pathways for small area farmers provides both an opportunity and a risk. From a positive perspective many of the sources defined can be accessed with relative ease. However, as small area farmers tend to be somewhat eclectic in nature, there is a risk that many producers will still miss out on receipt of information if a broader brush approach is taken. One way to somewhat counter this is through stronger linkage with the relevant rural lands protection boards (or similar) in each state, as they send notification to all landholders regarding rate payments for all agricultural land. Important inserts on OHS issues could potentially be included with dispersal of their notifications. Moreover, improved links with the Australian Council of Rural Journalists may also prove beneficial.

Notwithstanding the issues regarding access to information through the internet, there remains scope for a centralised conduit through such short, sharp and focused OHS information could be accessed. The concept of an information clearinghouse was supported within the workshops.

4.9 OHS Guidance Material

There was a clear determination from respondents in the study that much of the current OHS guidance material is often too detailed and people simply won't read it. The recommendations were for short, sharp materials (single page - backed), written in plain English that outline hazards, risks and solutions. Appropriate photos to accompany this written material were strongly endorsed.

In addition to the information gap relating to hazards and controls, there is significant confusion among small area farmers regarding their responsibilities under OHS requirements. Given the introduction of the harmonised legislation, this is an opportune time to develop short and sharp one-two page summaries for producers.

Other mechanisms for information dissemination were local grower markets, field days, commodity magazines, local councils / government (Catchment Management Authorities), stock and station agents. While internet resources were not widely accessed, there was a perception by respondents that they would have merit if they could be located at a one-stop site for such information.

To increase the quality of the information that is disseminated between producers, particularly through the personal networks including other farmers and neighbours, it is vital that the most accurate and practical source information is drawn on.

In general, communication pathways for OHS information were relatively informal for the respondents. This raises an issue regarding the validity of some of the information that small area farmers may be receiving. That is, while people may be well intended, it will be relatively easy for either incorrect or perhaps even dangerous misinformation to be transferred through these groups. Ensuring that accurate and highly credible information is available and also accessible within the

networks that these producers use is an important future consideration. This is particularly so as there appears to be an increasing demand to “retire” to small area holdings, thereby potentially exposing many more individuals to risks faced in production on these farms.

4.10 Knowledge of Risk

Data from the benchmarking process suggested that the vast majority of respondents were aware of risks with certain work processes/ equipment; yet felt that they still had to take risks to get the job done. A significant proportion also suggested that not all accidents were preventable. This finding reinforces the notion that knowledge alone is not sufficient to facilitate safety practice and hence a sole reliance on information provision is likely to have limited impact in improving health and safety.

As previously highlighted the lack of media coverage relating to deaths and serious injuries in agriculture, also reinforces a less than optimal attitude to safety. While some respondents had made changes to their properties in the past 12 months simply as a function of seeing reports in the media, a stronger lever for action was personal injury. These findings support those of previous work completed with commercial grain / sheep producers in Western Australia.¹³ Hence, the media is likely to play a significant role in increasing perceived risk of small area farmers and linkage through relevant communication channels will be important to addressing this.

If knowledge of risk is enhanced via the media and other means, then there needs to be in place a system that facilitates management of these risks. In addition to information, the other area of note required to improve management of high risk hazards will be relevant training. It was apparent that the bulk of respondents had undertaken little in the way of formal training. In many instances this simply reflected a lack of demand by respondents, however when individuals did want training, some barriers were identified. As many of the respondents still held “a real job” during the day, this restricted their availability for training to after hours, weekends and/or days off. This was also further reinforced by a lack of flexibility of trainers and training organisations. Overall, while most understood the potential value of training, the inconvenience of such actions was seen as a significant barrier.

4.11 Small Scale Horticulturalists

Initial discussion focused on the definition of market gardeners, with the consensus of the meeting being that they are better termed small scale horticulturalists. For this group it was clear that they faced a similar range of hazards and that the OHS risks relate to activity production rather than land size. Most frequently these producers obtain their OHS information from advisers, agronomists and other growers. Some of the niche markets within small scale horticulture are ethnically based and dominated by particular groups. As such, while mainstream material was seen to be relevant, English literacy is often an issue of concern and requires consideration in the development of any resource materials. From a positive perspective, the often close inter-linkages based on ethnicity among producers of specific crops, may actually facilitate the dispersion of relevant OHS information.

Based on the evidence from this study it is evident that small scale horticulturalists are a vulnerable group which is hard to reach through conventional health and safety communication pathways. It was also apparent that advisers and agronomists supporting this group play a key role. And if provided with suitable information may provide a useful conduit to assist in disseminating health and safety information and more importantly, its adoption. As such, further targeted intervention approaches are required with this group.

4.12 Study Limitations

The definition of what constitutes a small area farm has been an issue of considerable debate throughout this study. However, the open-ended definition was used in this study including self-selection, does not reflect the breadth of small area farms operating in Australia and the varying geographical size, commodity types produced and commercial orientation of these farms. Rather than being perceived as a limitation it is believed that this has broadened the scope and applicability of the results. Clearly, if further studies are to be undertaken then any comparisons should be treated cautiously unless the same broad definition is applied.

The use of workshops and field days to obtain information from small area farmers may also have impacted on the results due to positive response bias. Similarly, as small area farmers are likely to be a diverse group of individuals, it is not clear just how representative the sample was. Furthermore, there is no clearly identifiable group to compare the sample against to assess this. Nonetheless, the data resulting from the workshops and field days drawing on both qualitative and quantitative data was relatively consistent. This provides some confidence in the validity of the responses obtained and the overall study findings.

5. Recommendations

This study has provided the first assessment of the health and safety knowledge and practices of small area farmers in Australia. This sector of the agricultural community will continue to “grow” for some time, as increasing numbers of “baby boomers” reach retirement age. This study has clearly defined that small area farms account for approximately 10% of all on-farm fatalities and while the contribution to morbidity cannot be determined with any accuracy, it can be proposed that it would at least match this level.

The potential channels available for provision of relevant information to assist these producers in maintaining and/or improving their health and safety are considerable.

The major recommendations are that:

1. The number of deaths, injuries and exposure to significant hazards demonstrates a need for further action to improve health and safety performance on small farms.
2. Future resource materials are tailored based on the advice provided in this study by participants - that is, concise one/ two page resources focusing on common high risk hazards and effective solutions.
3. Succinct information outlining OHS responsibilities required under the nationally harmonised legislation be developed for small scale farmers to ensure they are aware of their responsibilities.
4. A national clearinghouse for information relevant to farm health and safety be established that includes a specific component for small area farmers.
5. Support be provided to implement the draft communications plan for small area farmers developed in this study
6. Further preliminary work is required with small area horticulturalists to document their knowledge and attitudes to health and safety risks. This should include addressing issues relating to pesticides use and may require specific language skills other than English.

Appendix 1

Key messages	Target audience	Method	Timeline	Who	Resources
<p>People living on rural residential 'acreage' are being injured by tractors, chainsaws, motorbikes and quad bikes.</p> <p>Children are drowning in rural residential farm dams and swimming pools.</p> <p>Ensure swimming pools are fenced.</p> <p>Build a fenced '<i>Safe Play Area</i>' for toddlers and young children.</p> <p>Always wear a helmet when riding horses and motorbikes.</p>	<p>Rural residential homes</p> <p>Small acreage periurban farm residences</p>	<p>Direct mail with council rates notices</p> <p>Farm safety display material at council centres</p> <p>Safety information displayed at farmer markets</p>		<p>Shire Councils</p> <p>Stock and Station/ Rural Suppliers</p> <p>Vets</p>	<p>Farm Safety Fact Sheets</p> <p>Farm Safety Guides</p>

<p>People working on lifestyle/ hobby farms are being injured by tractors, chainsaws, motorbikes and quad bikes.</p> <p>Children are drowning in lifestyle/ hobby farm dams.</p> <p>Make sure tractors are fitted with roll bars.</p> <p>Check and make sure PTO shafts are guarded.</p>	<p>Lifestyle/ Hobby Farmers</p> <p>Periurban lifestyle farmers</p>	<p>Direct mail with council rates notices</p> <p>Farm safety display material at Shire Council offices/ Centres</p> <p>Safety information displayed at farmer markets</p>		<p>Shire Councils</p> <p>Departments of Conservation and Land Management</p> <p>Departments of Agriculture</p>	<p>Farm Safety Fact Sheets</p> <p>Farm Safety Guides</p> <p>Farm Safety Web Net</p>
<p>People working on small farms are being injured by tractors, chainsaws motorbikes and quad bikes.</p> <p>Older farmers are being injured by livestock, tractors and quad bikes on small farms</p> <p>Children are drowning on farms: Build a 'Safe Play Area' for children.</p>	<p>Small Scale/ Size Farmers</p>	<p>Farm Safety Fact Sheets</p> <p>Web based safety information</p> <p>Radio</p> <p>TV</p> <p>Newspapers</p> <p>Farm Magazines</p> <p>Advertorial for newspapers and farm magazines</p> <p>Displays at Farmer's Markets /Field Days</p>		<p>Vets</p> <p>Farm Consultants</p> <p>RLPB (ALPH)</p> <p>Farmer Organisations</p> <p>Farm Commodity Organisations</p> <p>ACAHS</p> <p>Farmsafe Australia</p> <p>Giddy Goanna</p> <p>Kidsafe Australia</p>	<p>Mail out of safety information. eg factsheets as an insert in farm magazines and commodity newspapers/ newsletters</p> <p>Farm Safety Fact Sheets</p> <p>Farm Safety Guides</p> <p>Farm Safety Web Net</p>

<p>Tractor safety</p> <p>Picking Safety</p> <p>Packing Safety</p> <p>Chemical Safety</p> <p>Safety of Children</p> <p>Safety of Young/ Inexperienced/ Entry Level Farm Workers</p> <p>Safety of Older Farmers</p>	<p>Small scale (size) horticultural farmers</p>	<p>Farm Safety Promotion using:</p> <p>Radio</p> <p>TV</p> <p>Newspapers</p> <p>Farm Magazines</p> <p>Advertorial</p> <p>Farmer's Markets</p> <p>Ag Field Days</p>		<p>Horticulture Australia</p> <p>RIRDC</p> <p>Farmsafe Australia</p> <p>APVMA</p> <p>Commodity Organisations</p>	<p>Farm Safety Fact Sheets</p> <p>Farm Safety Guides</p>
<p>Farm Safety Training – Where do you Get It?</p> <p>Chainsaws</p> <p>First Aid</p> <p>Quad bikes</p> <p>Tractors</p>	<p>All small scale, lifestyle and rural residential farmers</p>	<p>Training - Where do you get it?</p> <p>Letter to training providers reminding them of this target group, have different training availability ie after hours/ weekends/ flexible delivery.</p>		<p>Rural Fire Service</p> <p>St John</p> <p>Red Cross</p> <p>Shire Councils</p> <p>RLPB</p> <p>TAFE</p>	<p>Letter to training providers, peak training bodies</p>

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Safe Farming on Small Farms

By John Temperley, Tony Lower, Emily Herde and John Curtis

Pub. No. 11/167

This report is the first in-depth assessment of the health and safety knowledge and practices of small area farmers in Australia. The data will provide a basis upon which to develop relevant implementation approaches to assist the increasingly large number of small area farmers in improving their health and safety.

Concerns have come from government and those involved with policy development that these farmers are not involved or represented and that small area farmers are not the target of mainstream farming safety programs. Consequently, this report is targeted at those agencies that have a role to play in enhancing the regulatory basis and/or active implementation of health and safety interventions.

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