

Using Producers' Perceptions  
of Risk to Promote Safer  
Manual Handling on Farms



# Using Producers' Perceptions of Risk to Promote Safer Manual Handling on Farms

by

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# Manual Handling Injuries on Farms

## *Why worry about manual handling injuries?*



Manual handling is one of the most common causes of injury on Australian farms. According to New South Wales WorkCover, about two-thirds of major back injuries on farms are caused by manual handling costing some \$1.8 million in workers' compensation payments every year.

The reason for this is easy to see when you think about the range of manual handling tasks a primary producer has to do, from loading and unloading bags of feed and chemical drums, to hitching implements to tractors, to baling hay, tractor work and marking and shearing stock.

Manual handling injuries affect the wrists, back, neck and shoulders and can cause a number of problems for a primary producer. These injuries can often mean that it takes longer to do tasks and restrict the range of tasks that a person can do.

As a result, a person with an injury will have to depend more heavily on workmates and family for assistance. It also means that a person with an injury often suffers long-term pain and discomfort, which has important implications for their quality of life as well as the productivity of their farm business.

In a recent survey of NSW dairy producers, two-thirds said that they were experiencing back troubles. Also, half of these producers said that they had been suffering back troubles for ten years or more.<sup>1</sup> The researchers who did the survey estimated that the productivity losses associated with back troubles could cost a producer as much as \$23,000 a year (calculated on the basis of a 20% reduction in work capacity).

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<sup>1</sup>Lower, T., Fuller, B. and Tonge, F. 1996 'Factors Associated with Back Trouble in Dairy Farmers'. *Journal of Agricultural Safety and Health*, vol. 2, no. 1, pp.17-25.

## ***Understanding primary producers' perceptions of manual handling risks***

Because manual handling injuries are such a big problem among primary producers, New South Wales WorkCover asked the Rural Development Centre at the University of New England to investigate how primary producers view the manual handling risks they face.

The risks that we asked producers about include not only the risk of injuries, but also financial and climatic risks. We asked producers about these other sorts of risks to help place producers' perceptions of health and safety risks in the context of the other sorts of risks they have to cope with.

The idea was that, if we have a better understanding of how primary producers view these risks, then we could use this understanding to work out ways of improving the relevance and effectiveness of programs for promoting safe manual handling practices in the farm workplace.

### ***What risks did we ask producers about?***

Because we wanted to improve our understanding of how producers see the risks they face, we began the study by getting groups of producers together. In these groups we asked producers to tell us what sorts of risks they were concerned about.

In the next part of the study we took a subset of these risks to ask individual producers about in more detail. These risks are summarised in table 1.

**Table 1:  
Risks evaluated by producers.**

	<b>Risks</b>
1.	Going broke
2.	Chemicals affecting your health.
3.	Psychological stress.
4.	Back injuries from shearing.
5.	Contact with overhead power lines.
6.	Injuries from using farm machinery and equipment.
7.	Tractor accidents.
8.	Accidents involving employees.
9.	Back injuries from lifting heavy or bulky things.
10.	Being hurt when using chainsaws and other motorised tools.
11.	Shooting accidents.
12.	Natural disasters.
13.	Back injuries from farm vehicles.
14.	Things that can go wrong in the farm workshop.
15.	Accidents on rural roads.
16.	Back injuries from handling animals.
17.	Being injured when handling animals.
18.	Motorbike accidents.
19.	Hearing loss from shooting.
20.	Horses and accidents.
21.	Minor cuts, bruises and sprains.

The risks are listed in order of how important producers believed it was to be doing something about reducing the risk.

# Perceptions of Manual Handling Risks

## Livestock

### *The statistics*

- In NSW, 10% of all farm injuries resulting in workers' compensation claims between 1991 and 1992 were from stock handling.<sup>2</sup>
- In NSW, animals were the most common agent of injury to agricultural workers between 1991 and 1992, accounting for 25% of serious injuries for which workers' compensation was claimed.<sup>2</sup>
- An 18-month survey of 919 farms in northern NSW<sup>3</sup> revealed that stock handling accounted for 46 per cent of all serious injuries recorded (requiring more than five days off work) and 22% of all injuries. The average cost of these injuries was calculated to be around \$1,000 per injury.

### *What primary producers told us*

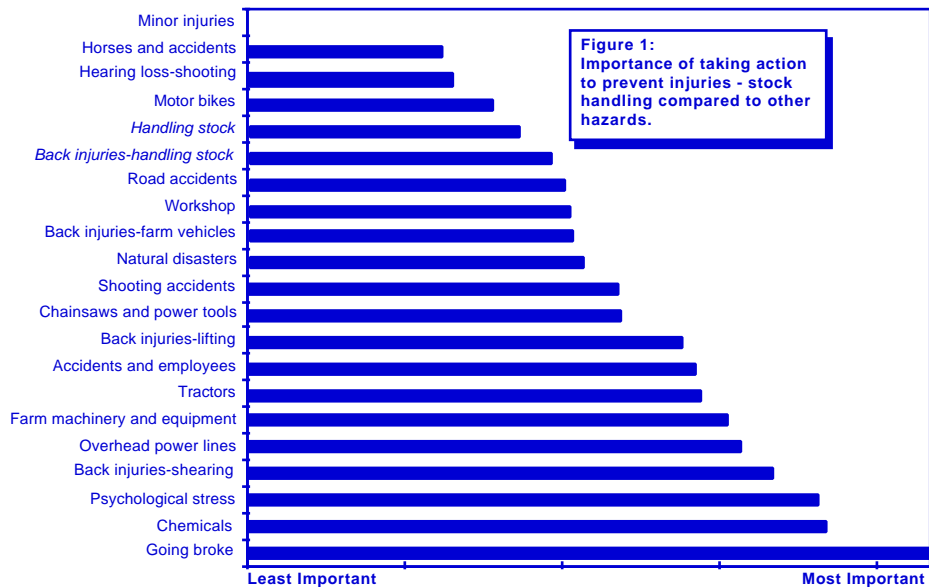
Primary producers who took part in our study felt that:

- there is not much producers can do about the unpredictability of animals;
- while injuries from handling stock happen a lot they are unlikely to be serious;
- compared with other injury risks producers face, they do not place much importance on preventing injuries from stock handling; and
- many devices for making stock work safer are too expensive or impractical.

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<sup>2</sup>WorkCover Authority, 1993. *Employment Injuries in Agriculture and Forestry, Workers Compensation Statistics New South Wales 1991-92*. WorkCover Authority, NSW.

<sup>3</sup>Low, J.M. and Griffith, G.R. 1994. 'What is the Cost of Farm Injury?' in *Farmsafe Australia Yearbook 1994*. Farmsafe Australia.



### ***Opportunities for promotion***

Producers’ perceptions about the seriousness of injuries associated with animal handling tasks are based on direct and extensive experience, and therefore are strongly held.

This means that it is going to be very difficult to persuade producers that the risks associated with animal handling tasks are more serious than they currently believe them to be.

For this reason, promotion strategies will need to focus on increasing benefits, and decreasing costs to farmers. For example, strategies should link safe stock handling practices and devices to things, other than safety, that producers value, such as time and money savings. Characteristics of safe practices and devices that might be used to target these things include ease of use, ability to be operated by a single person, speed of use, and durability.



## Recommendations

- ◆ Identify and promote lower cost stock handling devices that can be used for a number of animal handling tasks.
- ◆ Promotion themes should emphasise the benefits of safer stock handling practices and devices in terms of time and money savings, increases in efficiency and ease of use.

## The Farm Workshop

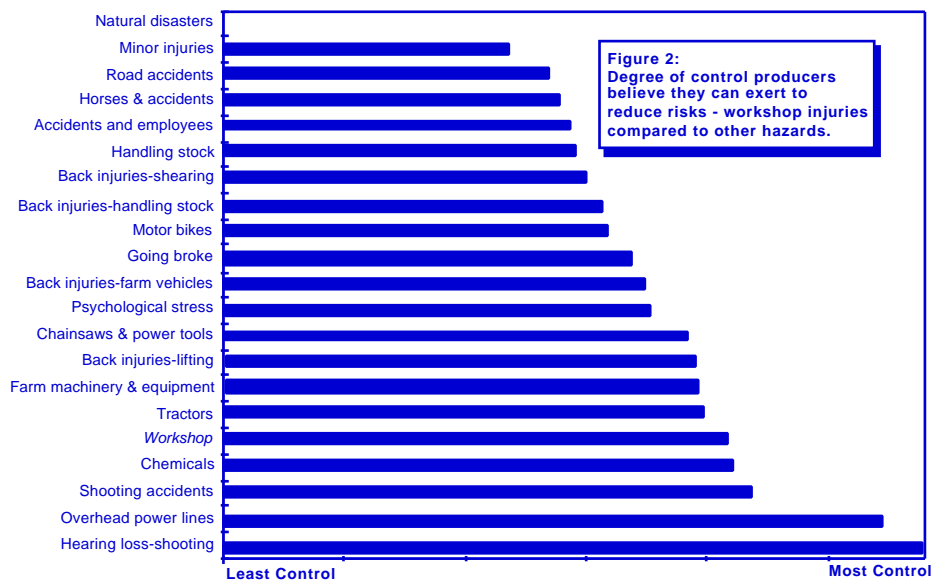
### *The statistics*

- A survey of 919 NSW farms<sup>3</sup> revealed that about one in ten farm injuries happen in the farm workshop or shed.
- This survey also revealed eye injuries, tractor-related injuries and manual handling injuries to be the most common workshop injuries.

### *What primary producers told us*

Primary producers who took part in our study felt that:

- they can exert a lot of control to prevent injuries in the workshop;
- most injuries that happen in the farm workshop are not likely to be serious; and
- electricity and dangerous equipment in the workshop are a particular concern.



### **Opportunities for promotion**

Producers' perceptions that they have a high degree of control in the workshop have important implications for identifying opportunities to promote safe manual handling in the farm workshop. For instance, if producers believe that they can exert a high degree of control in the workshop, they may well conclude that no further action is required.

One approach to overcoming this problem is to persuade producers that they have less control than they believe they have, and so encourage them to take more action to increase their control.

However, the danger in this sort of approach is the risk that it will produce defensive responses in producers, such as rejecting the information content of a campaign or discrediting the information source.

A better approach would be to focus on finding ways of increasing producers' motivation exert more control over manual handling hazards in the farm workshop.

Because many tasks performed in the farm workshop involve a combination of manual handling and other sorts of hazards, one way to do this would be to identify risks in the farm workshop producers are concerned about and promote safe manual handling practices and devices which reduce these risks.

For example, chemical mixing is a manual handling task commonly undertaken in, or near the farm workshop or shed. The manual handling components of this task include lifting and tipping containers of chemicals.

While producers tend to be relatively unconcerned by the manual handling aspects of this task, considerable evidence was found in this project to suggest that farmers are highly concerned about reducing the risks associated with absorbing, ingesting or inhaling chemicals. This presents an opportunity for promoting manual handling practices and devices that will also reduce these risks.

To illustrate, promotional messages could emphasise how spillage and ingestion can result from poor manual handling practices, how this may result in absorption or inhalation of chemicals, and how this risk can be reduced with practices such as the use of smaller containers, trolleys, pourers, lifting devices, and workshop layouts that reduce the risks of slips, falls, and strains.

Other risks in the farm workshop that producers who took part in this study were concerned about include the risk of electrocution; the potential for injuries to children; and the potential for serious injuries such as burns, limb amputation and blindness.

As with chemical risks, we believe that these concerns provide an opportunity to promote manual handling solutions that will reduce these sources of risk in the farm workshop.



## Recommendations

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- ◆ Identify and promote manual handling solutions to risks in the workshop that farmers are highly concerned about such as chemical spills, electrocution, injuries to children and serious injuries from workshop equipment.
- ◆ Promotion themes should positively reinforce producers' perceptions that they can exert control to reduce manual handling risks in the workshop.

## Farm Machinery and Equipment

### *The statistics*

- About 14% of producers who were admitted to NSW hospitals in between 1993 and 1994 were injured using farm machinery and equipment.<sup>4</sup>
- Accidents involving agricultural machinery and equipment are also one of the top three causes of deaths on Australian farms.<sup>4</sup>

### *What primary producers told us*

Producers who participated in our study told us that:

- they have a high degree of control over preventing injuries when using farm machinery and power tools;
- they believe injuries from mishaps while using farm machinery and power tools are likely to be serious; and
- they had taken a lot of action to manage the risks of injury associated with farm machinery and power tools.

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<sup>4</sup>Farmsafe Australia, 1996. *Goals, Targets and Strategy 1996-2001*.

The attributes that producers associate with farm machinery and equipment indicate that they are highly motivated to take action to reduce the risks related to these hazards.



Therefore, the opportunity exists for strategies to promote further action by:

- reinforcing producers' perceptions that these hazards are serious and controllable; and
- identifying and reducing barriers that prevent farmers from acting on these incentives.

The following are examples given by the producers we spoke to of things that make it difficult for them to implement safer manual handling practices when using farm machinery and equipment.

- Working with machinery and safety equipment that is poorly designed:

*Milking cups get heavy, particularly in swingover sheds—hurts your back.*

*Bad design of travelling irrigators when folding up, no safety.*

*Often there's no choice but to use old, run down machinery that doesn't have safety features.*

- Problems with balancing safety needs against other needs:

*The cost of safety devices can be prohibitive.*

*They [safe practices and devices] can be too complicated i.e. take too long to use.*

*Changes in the industry over the last 20 years have meant that you can't afford to pay people to help you so that there's more people working on their own with no-one to help.*

These examples suggest there may be considerable scope for improving the design of farm machinery and equipment to reduce the incidence of manual handling injuries associated with its use. Provided such designs increase the benefits and reduce the costs of safer behaviour to producers, producers' beliefs about the seriousness of injuries from farm machinery, and their confidence in their ability to prevent injuries occurring, will encourage the adoption of the improved designs.

## Recommendations



- ◆ Encourage re-design of farm machinery and equipment that makes it easier for producers to adopt safer manual handling practices.
- ◆ Promotion themes should positively reinforce producers' perceptions that these hazards are serious and that they can take action to reduce the risks associated with them.

## Back Injuries

### *The statistics*

- Between 1991 and 1992, in northern NSW, back injuries accounted for 68% of all farm injuries for which Workers' Compensation was claimed.<sup>5</sup>
- A recent survey of NSW dairy farmers two in three dairy farmers said that they were experiencing back troubles. Half of these farmers said that they had been suffering back troubles for ten years or more.<sup>6</sup>
- Between 1992 and 1993 new workers' compensation claims for back injury cost the NSW agricultural industry \$5.7 million.<sup>7</sup>

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<sup>5</sup>WorkCover Authority, 1993. *Workers Compensation Statistics, Country North Region New South Wales 199-92*. WorkCover Authority, NSW.

<sup>6</sup>See footnote 1.

<sup>7</sup>Flint, J., 1995. 'Backwatch Program'. A presentation to the *NSW Farmsafe Conference*, 20-21 October 1995.

## ***Producers' perceptions***

- Producers associate different attributes with different sources of back injury.
- There is social stigma attached to chronic back injuries.
- Producers operate in a social environment where there is an expectation that they should be able to lift heavy things without suffering back injury.

## ***Opportunities for promotion***

With respect to the first point, producers tend to believe that they can exert a high degree of control to prevent back injuries from lifting heavy or bulky things. They also believe back injuries from lifting are likely to be serious.

In contrast, producers feel that there is not a lot they can do to prevent back injuries from farm vehicles and back injuries from handling animals. They also believe such injuries are unlikely to be serious.



These findings suggest that the attributes producers associate with back injuries are highly task-specific. As a result, strategies that focus on promoting safe practices and devices with respect to particular tasks are likely to have a greater impact on producers' behaviour than strategies that focus on promoting general principles.

With respect to the social influences on producers, the findings of the research indicate that producers associate people with chronic back injuries with fraudulent compensation claims and older, unfit producers.

Similarly, there is an expectation that competent and capable producers should not need lifting devices.

Because social expectations are important determinants of peoples' behaviour, we believe that expectations and beliefs among primary producers, as to (a) the tasks competent and capable producers should be able to do; and (b) what sort of people suffer from back injuries are acting as barriers to producers adopting safer manual handling practices.

One way to overcome these barriers is to develop promotion strategies that link the use of safe manual handling practices to aspects of the farming occupation that the community holds in high esteem. This approach was used successfully in the oil industry by linking the wearing of hard hats, boots and safety harnesses with images of professional competence and prestige.

## Recommendations

- ◆ Identify and promote practical ways of lifting with respect to specific tasks.
- ◆ Institute promotion themes emphasising the benefits of safe lifting practices and devices in terms of labour savings, increases in efficiency and ease of use.
- ◆ Identify ways of linking the use of safe lifting practices and devices to aspects of the farming occupation that the community holds in high esteem.



## **Concluding Comments**

We believe that this work demonstrates the value of drawing on producers' experience and knowledge to:

- understand why they make the management decisions they do; and
- identify opportunities for promoting safe manual handling practices in the farm workplace.

We also believe that the work shows the importance of involving producers in the development and design of occupational health and safety programs aimed at reducing the incidence of farm injuries and fatalities.

In the study, we found that producers' classification of different occupational health and safety risks tended to be task-related. When we attempted to compare producers' perceptions of risks with the incidence of injuries associated with particular tasks, we found the technical injury categories very difficult to align with producers' task-related categories. While efforts to communicate information about these risks to producers are likely to be more effective if they are framed in terms of specific tasks, this will be difficult to do unless information relating to the task a producer is undertaking when injured is collected as a component of injury incidence data.

The study shows that there is a lot more in producers' assessments of the need to take action to reduce risks than simply the probability of being injured or otherwise affected. In particular, beliefs about controllability and seriousness of the consequences are important in these assessments. These attributes go some way to explaining why producers are more motivated to address some occupational health and safety hazards than others.

## ***Further information***

If you would like a copy of the full report, you can obtain one from the Rural Development Centre at the University of New England in Armidale, phone 02-6773 2220.

If you are involved in promoting manual handling safety on farms and would like to discuss the findings in greater detail, you can contact Jean Sandall or Ian Reeve at the Rural Development Centre, University of New England, in Armidale, phone 02-6773 2220.

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## Notes