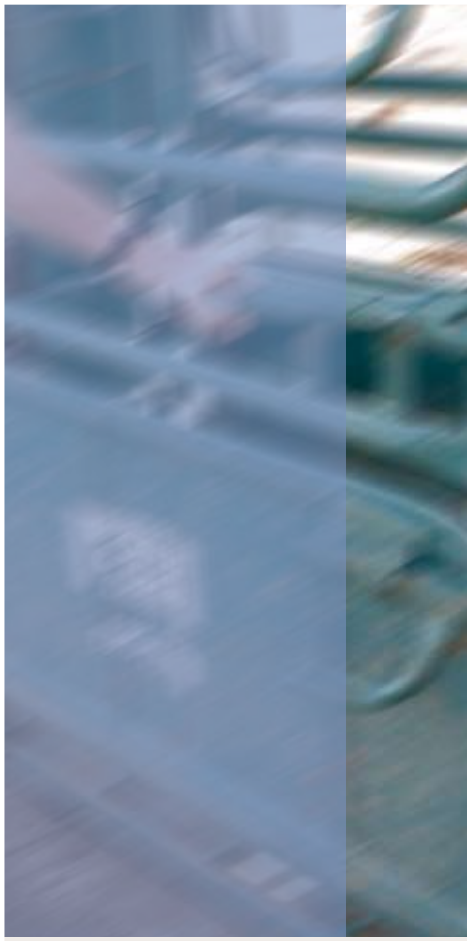
BEYOND COMMON SENSE

A report on the barriers to adoption of safety in the agriculture industry



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The role of the ASCC is to lead and coordinate national efforts to improve occupational health and safety (OHS) and workers' compensation arrangements, declare national standards and codes of practice for OHS and provide policy advice to the Workplace Relations Ministers' Council on OHS and workers' compensation arrangements.

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EXECUTIVE SUMMARY

This is a report on a study into improving occupational health and safety (OHS) outcomes for Australia's agriculture sector. The study is based on the premise that if OHS improvements are to be achieved in the agriculture sector it is crucial to be able to identify the barriers and the drivers influencing the industry. This can then inform the development of future national actions or projects likely to obviate the barriers and build on the drivers to improve OHS outcomes.

Study goals

The long-term goal of the study is to foster a strong safety culture in the agriculture industry so that accidents, injuries and fatalities are prevented or avoided as much as possible. A strong safety culture will require a behaviour change for many agriculture workers. Hence, the study focuses on identifying the attitudes, beliefs and values that workers in the agriculture industry currently bring to the issue of safety in the industry—their safety culture.

Qualitative research methodology

The study is relatively small-scale, undertaken over a short period of time and based on qualitative information collected through interviews with farmers and industry safety representatives. A review of other research conducted in the field indicates that many of the findings of this study are broadly consistent with those reported by other studies. It should be remembered that the study could not, in the time available, cover all commodity groups or all areas of Australia involved in the agriculture sector.

FINDINGS

Farmer attitudes are a barrier to increased safety

Farmers' attitudes towards safety on the farm represent a significant barrier to improvements in OHS. Farmers interviewed for this study do not feel sufficiently personally threatened by the likelihood of injury or accidents to alter their current behaviours.

There is a general view that injuries are a normal part of farming life and farmers are reasonably accepting of a high level of risk. However, the potentially serious consequences of injury do not appear to be given a great deal of consideration.

There is a view that the application of common sense is all that is required to avoid injury and accidents. It appears that many farmers consider that there is really nothing that can be done to make farm work safer. These attitudes will need to be addressed in efforts to increase farmers' safety awareness.

Safety is a relatively low priority

Because injury does not present as a major personal threat, farmers do not, overall, consider safety to be a high priority relative to other priorities. Farmers prioritised the need to make a living from the farm, increasing productivity and minimising costs above safety issues.

To some extent safety requirements and financial considerations are seen as competing priorities. Safety measures are often equated with purchasing new equipment.

There is also a perception that doing things safely takes longer—a distinct disincentive to safe behaviours when a high priority is given to making a living and minimising costs.

Farmers' autonomy and personal expertise are highly regarded
Interviews with farmers in this study indicate a strong respect for the personal characteristics of autonomy and self-reliance. Some approaches to OHS are seen to undermine these values and are likely to be met with resistance.

Some current approaches to OHS are seen as being threatening to the farmers' own sense of expertise. For many farmers, the term 'safety' in an OHS context is about others imposing standards—people who are not farmers telling farmers what to do.

IMPLICATIONS FOR OHS

Change the mix of strategies to emphasise a social marketing approach
Improving the health and safety of Australia's farm work will require a multi-faceted approach. There is an opportunity to build on existing efforts through balancing these with strategies aimed at promoting a safety mindset among farmers.

The application of social marketing techniques to encourage a shift in attitudes and behaviour should form one part of a coordinated, systematic approach to increasing the safety culture in the industry. Social marketing techniques have already been successfully applied to a wide range of health and safety initiatives in Australia.

Social marketing need not consist of expensive mass media campaigns; the principles can be applied through a range of media including local radio and newspapers and farm association/industry newsletters.

Two conditions are required to create behaviour change
We suggest that there are two conditions which will need to be met for farmers' safety-related behaviour to change and which should form the basis of the social marketing strategy:

- farmers must feel personally threatened by the risk of injury, and
- the perceived benefits of action must outweigh the perceived costs.

Increase the perceived threat level
One strategy for increasing the perceived threat of injury is to link the implications of an injury to those factors which are a high priority for farmers such as financial or lifestyle issues. This will need to be handled carefully so as not to induce excessively high stress levels.

The campaign might best be localised, undertaken through respected farmer associations/organisations, local farm safety action groups, and local rural services providers.

Farmers were very interested in and cautioned by stories of accidents or injuries to local farmers. Using the local media to publicise the accident and reminding farmers of appropriate safety solutions appears to be a highly efficacious method of raising awareness coupled with information on effective solutions.

Economic stress is a key issue for farmers. Reminding farmers of the potential cost of injury in time off work and the cost of employing others to do the work, especially when the costs are quantified wherever possible, is a useful strategy.

Emphasise the benefits
For the social marketing to be effective it will be important to carefully and continuously identify the benefits of safe work practices so that these can be incorporated into the message.

Messages that will resonate with farmers include those that link farm safety to the issues that farmers value, such as improved productivity and maintenance of the family farming lifestyle.

Provide realistic, practical and low cost options
Awareness raising should be accompanied by the provision of realistic and practical advice on ways to improve safety on the farm.

Safety-related projects that are low cost, and particularly if they are also do-it-yourself, are likely to be highly appealing to farmers and should be widely advertised.

Build on farmers' values
An understanding of farmers' values and the positive aspects of farming is an important consideration in encouraging farmers to take on the safety message. Messages should appeal to farmers' sense of autonomy and self-reliance and should acknowledge the expertise of the farmer.

Target messages carefully
Some safety messages could be targeted to specific groups including women, older farmers and the industries and sectors which serve agriculture.

Locally delivered messages can be both cheap and effective
Small scale, low key safety campaigns run by local groups and undertaken where the farmers gather could assist farmers to take the safety message personally, for example, at field days and sale yards.

Consider small scale program initiatives
Should funds be available, the findings of the study also support a submission-based program initiative inviting local safety groups or clubs to put together proposals for improving the safety culture in their area.

1. INTRODUCTION

This is a report on a study into improving occupational health and safety (OHS) outcomes for Australia's agriculture sector. The study was undertaken on behalf of the Australian Safety and Compensation Council over a period of five weeks from 1 February to 10 March 2006.

The long-term goal of the study is to foster a strong safety culture in the agriculture industry so that accidents, injuries and fatalities are prevented or avoided as much as possible. A strong safety culture will require a behaviour change for many agriculture workers. Hence, the study focuses on identifying the attitudes, beliefs and values that workers in the agriculture industry currently bring to the issue of safety in the industry—their safety culture. The barriers to a stronger safety culture in the industry are identified, as well as potential drivers that could foster behaviour change to build on and improve the current industry safety culture.

1.1 Background

The Australian Safety and Compensation Council (ASCC) is the national body that leads and coordinates efforts to prevent workplace death, injury and disease in Australia. The ASCC succeeds the National Occupational Health and Safety Commission. Like its predecessor, the ASCC is made up of representatives from federal, state and territory governments, the Australian Council of Trade Unions and the Australian Chamber of Commerce and Industry.

The ASCC is responsible for the *National OHS Strategy 2002-2012* (the National Strategy). The National Strategy provides a framework for ensuring that there is a sustained and substantial improvement in Australia's occupational health and safety performance over the next decade.

1.1.1 The National Strategy focus and targets

Initially, the National Strategy focused on four priority industries. These were: manufacturing; construction; transport and storage; and health and community services.

Information from various ASCC sources indicates that although the Australian Government, state and territory governments, industry associations, research bodies and private organisations have invested significant resources and effort into improving OHS in the agriculture sector in recent years, these efforts have not achieved the hoped for level of improvement.

Hence, the industry of 'agriculture, forestry and fishing' was added to the list of priority industries in August 2005. Efforts to improve OHS outcomes for this industry will focus initially on the agriculture sector.

The National Strategy's targets are to reduce work-related fatalities by at least 20 per cent and reduce workplace injury by at least 40 per cent by 30 June 2012. Interim targets, to be achieved by 30 June 2007, are to reduce work-related fatalities by at least 10 per cent and to reduce workplace injury by at least 20 per cent.

1.2 The study objectives

The study is based on the premise that if OHS improvements are to be achieved in the agriculture sector it is crucial to be able to identify the barriers and the drivers influencing the industry. This can then inform the development of future national actions or projects likely to obviate the barriers and build on the drivers to improve OHS outcomes.

The objectives of this research study are to identify:

- the drivers or motivators influencing behaviour change in the sector
- the critical issues, barriers and gaps preventing improved OHS performance for the sector
- why recent efforts are not leading to an improvement in OHS in agriculture, and
- pivotal national actions or key characteristics likely to address the critical issues identified and build upon drivers of behaviour change to inform the design and delivery of future national actions or projects.

1.3 The scope of the study

In recent years a great deal of research effort has gone into determining and documenting the patterns and main causes of accidents, injuries and fatalities on farms. The research suggests that tractors and other farm equipment, animals, motorcars and bikes are leading causes, with the most common environments where accidents occur being in maintenance of machinery, bike and horse riding, and cropping and animal handling (Day, et al, 1:1999). A great deal of effort has been directed towards determining and promoting prevention measures, for example, roll over protection, safe machine design, personal protective equipment and education and training.

However, accidents continue to happen at a rate that is unacceptable. This suggests there are other issues that need to be addressed in the industry. Hence, this study is not intended to duplicate the research effort into the specific causes of the accidents. Rather, the study is intended to examine what is happening when farmers, despite the availability of protective equipment and many known safe behaviours, nevertheless behave in ways that have the potential to cause accidents, sometimes with fatal results.

1.3.1 The target group

The statistics and research undertaken in the OHS area to date suggest that there could be benefits in targeting particular farmer groups potentially involved in these unsafe work practices.

Almost all (99 per cent) Australian farms are family-owned and operated, with a high proportion of self-employed, family and casual workers. The workforce is relatively old, with over 70 per cent aged 35 years or older in 2003–04 compared to 58 per cent for the rest of the economy. The median age of agriculture workers in 2001 was 50. All 21 fatalities recorded under the occupation category ‘managers and administrators’ occurred at rural properties. The fatalities incidence rate for the over 55-age group is approximately double the industry average (Productivity Commission, 2005).

Hence, this study has concentrated on those currently deemed to be most at risk: farmers and farm workers on rural properties and older workers. A small number of younger workers were also interviewed. In order to obtain a cross-section of farmers, a number of agriculture commodity groups have also been covered: horticulture; the dairy industry; the sheep industry and the cattle industry in various locations in three east coast states.

1.4 The study methodology

A mixed methodology was used in the study involving:

- a desk-based analysis of the available information, including a brief literature review of related research and evaluations/reviews of initiatives
- field work comprising a series of group discussions and in-depth interviews with the target group of farmers, and
- telephone interviews with a number of industry safety practitioners, including trainers, local farmer group organisers and safety industry representatives.

Thirty-seven in-depth, semi-structured interviews were undertaken. Most interviews were undertaken face-to-face, with three by phone. Most interviews averaged around twenty minutes. Interviewees were a mixture of self-employed, employers and employees. The following Table shows the composition of interviewees by industry and gender.

In order to maximise the number of interviews that could be undertaken in the short time frame available, interviews were 'piggy-backed' onto existing events such as field days and training courses wherever possible.

(Note that for the sake of brevity all farm workers, including the self-employed, employers and employees will be referred to as 'farmers' from here on in this report.)

Table1. Interviewees by industry and gender.

Industry	Male	Female
Beef cattle	5	2
Dairy cattle	5	3
Beef and sheep	3	1
Sheep	3	3
Horticulture	3	2
Industry retailers	2	0
Safety experts	4	1
TOTAL	25	12

1.4.1 Conceptual basis of the study

Because this study is primarily concerned with an understanding of farmer attitudes and behaviour, the issues are explored using the broad framework of the health beliefs model (Becker, 1979). This model is the most widely researched and accepted theory of why people do and do not practice healthy behaviours. Whilst not without its limitations, the use of the model in the OHS context ensures that the research is predicated on a strong empirical base and forms a logically consistent set of findings. A description of the model is provided in Chapter 3.

1.4.2 Caveat to the findings

Although, at 37 informants, this qualitative study is larger than many others undertaken in this field, it is nevertheless a small study, undertaken over a relatively short period of time. Although a review of other research conducted in the field indicates that many of the findings of this study are broadly consistent with those reported by other studies, it should be remembered that the study could not, in the time available, cover all commodity groups or all areas of Australia.

1.4.3 Acknowledgements

The authors gratefully acknowledge the time and expertise that was freely given by the Australian Safety and Compensation Council, the safety experts and most particularly, by the farmers who participated in the study.

2. FINDINGS ON FARMERS' CURRENT ATTITUDES TO SAFETY

Experts think safety is very important, but what do farmers really think about safety? This section explores the findings of the study on the extent to which farmers consider safety a matter of importance in their workplaces. It also examines farmers' perceptions of the benefits and barriers to a stronger safety culture. In doing so, it uses the information gained from the interviews with farmers and safety experts and learnings from other studies/research reports where appropriate.

2.1 Attitudes to safety are a significant barrier

A good understanding of how farmers see safety in the workplace is important in developing a better understanding of why the OHS efforts to date may not have had a major impact. It is also of crucial importance in fostering a stronger safety culture in the industry.

2.1.1 Injury does not present as a major personal threat

Farmers do not generally see injuries and accidents as a major threat to them personally. Whilst not unaware that serious farm accidents and fatalities do happen, to a fair extent these things are seen to happen to other people.

> *'As long as you approach things in the right way you'll be okay. Sure it can be dangerous, but not if you use your equipment properly, not if you're doing your job properly.'*

Most of the farmers we spoke to suggested that they did not personally feel unsafe, even when they took what they considered to be calculated risks.

> *'Oh sure, I push my tractor to the limits, but I know from experience what those limits are.'*

It seems that what might be considered unsafe behaviour is acceptable when you '*know what you're doing*'. For example, another farmer admitted to always jumping off his tractor when it was still moving. When he bought a new tractor he found he couldn't jump down from the moving tractor easily so has now stopped the behaviour. He said that he considered the jumping pretty safe—he did not personally feel at risk because he knew what he was doing—though he knew that many others thought it unsafe.

Many expressed a view that the application of common sense is the major requirement for avoiding injury and accidents.

> *'It's a pretty safe job, as long as you use your common sense.'*

> *'Driving a tractor is nine tenths common sense.'*

Farmers' reliance on common sense has also been documented in other studies. For example a study involving farmers who had self-selected for a *Managing Farm Safety* intervention, arguably a group with a relatively high appreciation of safety, found that 58 per cent relied on their common sense to conduct safety checks (Day et al, 1999).

2.1.2 Learning from experience is not necessarily transferred to other tasks

Several farmers said that they had been involved in near misses. This had made them very cautious around the particular piece of equipment.

> *'I was splitting firewood and nearly lost an eye. Up till then I thought safety shields were a bit ridiculous. Now I make sure that I'm the only one that does the job and I almost always wear one* (a safety shield)*.'*

But the near misses do not seem to translate into an overall attitude of safety. This same farmer suggested that he still thought that safe behaviours were over-rated and that common sense was the key to safety. This attitude was also prevalent in other farmers who reported near misses or close calls.

2.1.3 A certain amount of injury is to be expected

A widespread perception amongst the farmers we interviewed is that injuries and accidents are a normal part of farming life. Even the farmers who had experienced high risk events appeared to be quite sanguine about the risk. Given the nature of the work, they argued, it should be expected that a farmer would suffer an injury from time to time.

> *'It's just a part of being a farmer. Every day you expect to shed some blood'.*

Other research has also found that farmers normalise injuries and are tolerant to the risks (for example, Durey and Lower, 2004). An industry expert interviewed for this study told the story of asking a group of farmers at a meeting if any of them had sustained an injury on the farm. No one said they had. The farmers were then asked how many of them had lost a finger during farm work. Almost all raised their hands. They had simply not deemed the loss of a digit of sufficient importance to be considered an injury.

In general, injuries are seen as being part of life, but not necessarily a significant personal threat to livelihood. This somewhat fatalistic attitude may lead to complacency. It appears that many farmers consider that there is really nothing that can be done to make farm work safer. This attitude will need to be addressed in efforts to increase farmers' safety awareness.

2.2 Safety is not a high priority

Because injury does not present as a major personal threat, farmers do not, overall, consider safety to be a high priority relative to other priorities. Farmers prioritised the need to make a living from the farm, increasing productivity and minimising costs. This accords with other research on the issue (for example, Durey and Lower, 2004; Cassell and Day, 1998). In another study the rank order of priority was given as: making a living; maintaining their rural lifestyle; the imperative of getting the job done; minimising costs' and farm management issues (Day et al, 1999). This is not to suggest that farmers are completely unconcerned about safety, only perhaps that it is less immediate an issue when there are other priorities to be considered.

2.2.1 Safety equals costs in farmers' minds

To some extent safety requirements and financial considerations are seen as competing priorities. There is a perception that safety costs money.

> *'If you comply with OHS it's going to cost you a bloody fortune.'*

One reason why this belief is prevalent is because safety measures are often equated with purchasing new equipment—a perception that is reinforced by some recent pieces of legislation.

For example, one interviewee, a Queensland cattle farmer, described his frustration and the economic pain involved in having to purchase a new vehicle because the legislation required that all workers he was transporting had to be within the cab. Previously he had transported workers in the back of his hi-lux, but since the cab was not large enough for them all to sit inside he had to purchase a new vehicle.

There is also a strong perception that doing things safely takes longer, a distinct disincentive to safe behaviours when a high priority is given to making a living and minimising costs.

It is true that there is often a tension between acting safely and getting a job done efficiently. One interviewee, a 73 year old cattle farmer told of how he had recently been pushing a cow stuck in a gate and snapped his Achilles tendon—a very debilitating and painful experience. When asked if he thought there was any other way of dealing with the situation other than through the application of brute force he pointed out that it would have taken a lot of time and effort to do it safely. He smilingly explained:

> '*Well, I could have gone back to the shed and gotten the tractor and driven it down to the paddock, then pushed the cow a bit then gotten off the tractor and closed the gate a bit, then gotten back on the tractor and pushed a bit more, then gotten off the tractor and closed the gate, then driven the tractor back to the shed. Funnily enough, I chose just to push the thing!*'

Nevertheless, safety does not appear to be a major concern for farmers because it is not seen as contributing to their highest priority—the profitability of the farm. Furthermore, the risks of farm injury do not pose sufficient a personal threat to the majority of farmers that they would need to elevate safety in their list of priorities. Unless safety is seen as a major concern OHS efforts will have only limited success. At present farmer attitudes appear to pose a significant barrier to improving safety on the farm. Efforts towards improving farm safety will need to address farmer attitudes, taking into consideration the culture of farmers and their values.

2.3 Autonomy is highly prized

Interviews with farmers in this study, as well as elsewhere (for example, Durey and Lower, 2004) suggest a culture of 'rugged individualism' is strongly represented within the sector. Qualities of self-reliance and autonomy are highly valued by farmers. Asking for help or advice did not appear to be common amongst those interviewed.

One dairy farm woman who was working part-time on a neighbour's farm talked about having to use an all terrain vehicle (ATV) on the neighbour's property. She said that she was perplexed about why they didn't offer her any training even though they knew she had never driven one before. She thought it was because they didn't want to insult her by assuming that she didn't have all the necessary skills to do the job. When we asked her why she didn't ask for the training, she replied that she felt embarrassed to ask. Fortunately, she saw a demonstration of safe ATV practice at a field day shortly after she had started work. She said she was amazed about how different the balance was from riding a motor bike and realised that her own and her neighbours' attitudes had unwittingly put her at risk.

This suggests a strong respect for the autonomy of the individual in undertaking farm tasks, even relatively dangerous ones. It is possible that this desire and respect for autonomy can be harnessed in influencing the current safety culture.

2.3.1 Farmers see themselves as the safety experts

Farmers tended to describe themselves as the experts, including on matters of safety. As discussed above, they defined safety as the application of common sense.

> *'I know what works, I've been doing it for years.'*
>
> *'I'm pretty relaxed around machinery.'*

Many accidents are explained away as carelessness, and although not desirable, they are seen as understandable in the context of the busy farm life. An accident does not appear to diminish their status as safety experts in their own eyes.

> *'You just need commonsense—carelessness causes a lot of accidents.'*

Hence, these farmers who have a strong regard for their own autonomy deeply resent being told what to do by 'non-expert' government officials. The definition of 'safety' as they perceive it in an OHS context is about others imposing standards—people who are not farmers telling farmers what to do.

> *'The government should make suggestions rather than telling people what to do. If someone came out to my farm and told me to only do this or that with my tractor, I'd spit the dummy. I'd tell them "well I'm leaving it here"* (that is, I'm not going to use it.)'

There are strong implications here for the type of safety messages preferred by farmers. Any direct attack on farmers' 'expert' status may well have the opposite to the desired effect.

2.3.2 Some farmers have very negative attitudes to current OHS legislation and enforcement

Given the finding that farmers strongly prize their autonomy on the farm and believe themselves to have the expertise required to work safely, it is not surprising that there are some very negative attitudes to the push for greater legislation. Some safety experts have suggested that farmers in one state have a heightened (and false, they assert) perception that OHS legislation is increasing in reach and volume because of campaigns against particular pieces of legislation by farmer associations. Regardless of the cause, almost every

farmer interviewed during this study had a very negative attitude to the perceived increase in legislation and its enforcement.

> *'Pushing this legislation business gets our backs up. We don't want someone else telling us what to do.'*

Many farmers are against the push for legislation on philosophical grounds. They strongly believe in the need for autonomy and the credo of personal responsibility.

> *'This legislating for safety, it's no good. It's taking away from the romance of working in the bush.'*
>
> *'It's all going too far, taking away from individual responsibility.'*
>
> *'People should be responsible for their own actions. It shouldn't always be about blaming the boss when something goes wrong.*'

Other farmers believe much of the legislation would prove to be unenforceable and in any case, would not result in an improved safety situation.

> *'You can't legislate for common sense.'*

Some farmers gave examples of mixed messages, where they believed that communication amongst the various safety organisations/councils was poor, resulting in unworkable or inconsistent advice. For example, several farmers complained about the mixed message around hats and helmets.

> *'They keep going down this workplace safety route but it doesn't make sense. For example first they tell us to wear a hat so we don't get cancer, now they tell us to wear a helmet. Where's the sense in that? It should be a matter of personal choice. I'm careful on the horse…I don't want to get skin cancer. I should be able to make that choice.''*

Some farmers believe some OHS regulations are dangerous in themselves.

> *'Now they make you put on power guards. But these crack and need replacing. They're far more dangerous when they're a bit broken than without them at all.'*
>
> *'Roll bars are dangerous. My brother nearly killed himself when a roll bar hooked on a tree.'*

Some of the assertions made by farmers are reminiscent of the resistance to compulsory seat belt wearing and can be expected to die down over time. Other arguments can perhaps be seen more as excuses for inaction rather than genuine grievances. However, there is no escaping the fact that at the present many farmers have very strongly negative attitudes to OHS legislation. This has important implications for the appropriate mix of 'carrots and sticks' in attempting to create a better safety culture.

2.4 Small lot farmers are reluctant to take on employees

Some farmers expressed a reluctance to take on employees because of WorkCover requirements.

> *'Between WorkCover and OHS there's a big stick hanging over our heads. I haven't hired anyone because of that.'*

One farmer spoke about having two shearers lodge a compensation claim against him even though he considered it obvious that it was a bogus claim. His reaction is that he now only lets two relatives whom he trusts shear his sheep. The relatives are not professional shearers and are, presumably, at some risk of injury.

> *'Basically we can't afford to employ someone. The insurance industry closed us down.'*

> *'It's cheaper to run less stock than employ anyone.'*

Almost all small lot farmers interviewed in the study indicated that there was a climate of distrust of employees which resulted in either working longer hours (and thus placing them at greater risk of injury) or settling for a lower income.

It appears that the WorkCover provisions may be having the perverse effect of putting smaller lot farmers at risk by creating a climate of fear (whether justified or not). It is not clear if this view is wide spread, further research may be required.

2.5 Farmers' perceptions of the benefits of a stronger safety culture

In general, farmers had difficulty in identifying the benefits of a stronger safety culture on their farms except for the most obvious. They were interested in ensuring that farm workers were not injured. Many farmers said that they considered some of the workers on their properties as part of the family and hence, would be as upset about an injury to a worker as they would be if it happened to a family member.

Most of the interviewees, however, considered that there was already a reasonable amount of information on safety. They did not consider that an increased emphasis on farm safety was necessary.

2.6 Other safety-related issues

A number of other safety-related issues were bought to our attention during the in-depth interviews.

2.6.1 The safety knowledge of hobby farmers

Several interviewees in different locations mentioned the 'problem' of hobby farmers. They were strongly of the view that hobby farmers were quite unaware of the safe way of operating much of the equipment in use on their farms. The interviewees were concerned about the

likelihood of severe accidents on some of the hobby farms. A major concern was the use of chain saws and other farm machinery. Several interviewees said they had called on the hobby farmers to offer advice after being concerned about some poor safety behaviour they had observed.

A couple of interviewees identified themselves as previously having been hobby farmers before taking up full-time farming. They echoed the concerns of other interviewees, saying that they know now how little they knew when they first started up.

There is not sufficient evidence to suggest that hobby farmers are, as a group, at risk on their farms. The incidents related in the study could be coincidental. However, it does seem reasonable to consider hobby farmers as a group for targeting information on farm safety.

2.6.2 The nature of farming is seen as a significant barrier to safety

Most interviewees pointed out that the nature of farming means that there will always be an element of danger in farm work. It is a very physical occupation, with a lot of lifting, climbing, handling animals and chemicals, and working with potentially high risk machinery.

> *'Farms are very big places, compared with an office—there's lots more that can go wrong.'*

> *'Working with livestock—there's always some unpredictability. I learnt early, never trust a bull.'*

Additionally, the nature of the work is multifaceted—in any given day a farmer will undertake widely different types of jobs and use many different types of equipment. Several small lot farmers pointed out that they are often working in isolation. This meant that there were fewer opportunities for sharing practices, observing, and learning from others. Many of the older farmers interviewed were doing things the way they were taught by their fathers. They acknowledged that they had little opportunity to reflect on and assess the efficiency and safety of their work practices. Some saw this as an impediment to safety—others considered it a benefit.

> *'You learn by doing, not from a piece of paper.'*

> *'The more often you do it the less dangerous it is to do.'*

Working in isolation also means that when accidents do happen, farmers are less likely to get assistance. Hence, it may be that there is a strong need to believe in their own invulnerability or else they may find it very stressful to perform some farm functions.

2.6.3 Economic pressures increase the likelihood of accidents

Economic stress is also a current and ongoing factor in today's farming, particularly on small farms. Reduced margins mean longer working hours and more time pressures and financial stress.

> *'There's increased pressure to do more so you're working faster—especially on a small farm—there's real time pressures so you cut corners.'*

The pressure created by economic stress and the subsequent potential increase in risk has been discussed in other studies cited in this report. It is likely that safety messages recognising the dangers of cutting corners under economic stress will resonate with farmers.

2.6.4 The ageing of the workforce

A number of safety experts interviewed for the study pointed out that the ageing of the workforce is a major contributor to farm accidents. The Productivity Commission Research Report confirms that workforce ageing is a significant characteristic of the industry. Older farmers could be expected to be less physically strong and slower to react, thus placing themselves in greater danger of an accident. Whilst some older farmers have kept up with technological change, there is still a group of older farmers who are quite set in their ways and are reluctant to modify their methods and farm activities to suit their physical capacity.

With fewer young people staying on the family farm, ageing farmers are still working full-time in demanding jobs at a time where in other occupations people may be retired or working part-time.

2.7 Are the National Strategy targets appropriate for the agriculture industry?

The National Strategy's targets in each of the five priority industries are to reduce work-related fatalities by at least 20 per cent and reduce workplace injury by at least 40 per cent by 30 June 2012. Interim targets, to be achieved by 30 June 2007, are to reduce work-related fatalities by at least 10 per cent and to reduce workplace injury by at least 20 per cent.

According to the Productivity Commission Research Report the agriculture industry has the oldest cohort of workers of any sector of the Australian economy. The median age of agriculture workers was estimated at 50 in 2001, up from 44 in 1981. Almost half of the workers in the beef industry were aged 55 years or older. In particular, the share of agriculture's workforce aged 65 or older is significantly higher than in other sectors of the economy. '*In 2003–4, there were around 9% of agricultural workers aged 65 years or over—this is more than 4 times the percentage of workers in this age category in the workforce generally.*' (105:2005)

This reflects the tendency for farmers to work beyond the traditional retirement age and brings in to question the appropriateness of comparing the safety record in the agriculture industry with those of other industries. The comparisons are being undertaken between an industry with a substantially older and frailer workforce and other industries where the workforce is almost totally under 65 years of age.

It also calls into question the appropriateness of directly incorporating the targets set for other sectors without adjusting the targets for the age of the workforce. As noted above, increasing age brings with it its own risks.

> *'I'm 77—most things I do on the farm will put myself in danger.'*

Some industry safety experts have suggested that over the last five years or so and into the short-term future, they were expecting the number of accidents, injuries and fatalities to rise

because of the increasing age of the agriculture workforce. They were of the opinion that the targets set were unachievable.

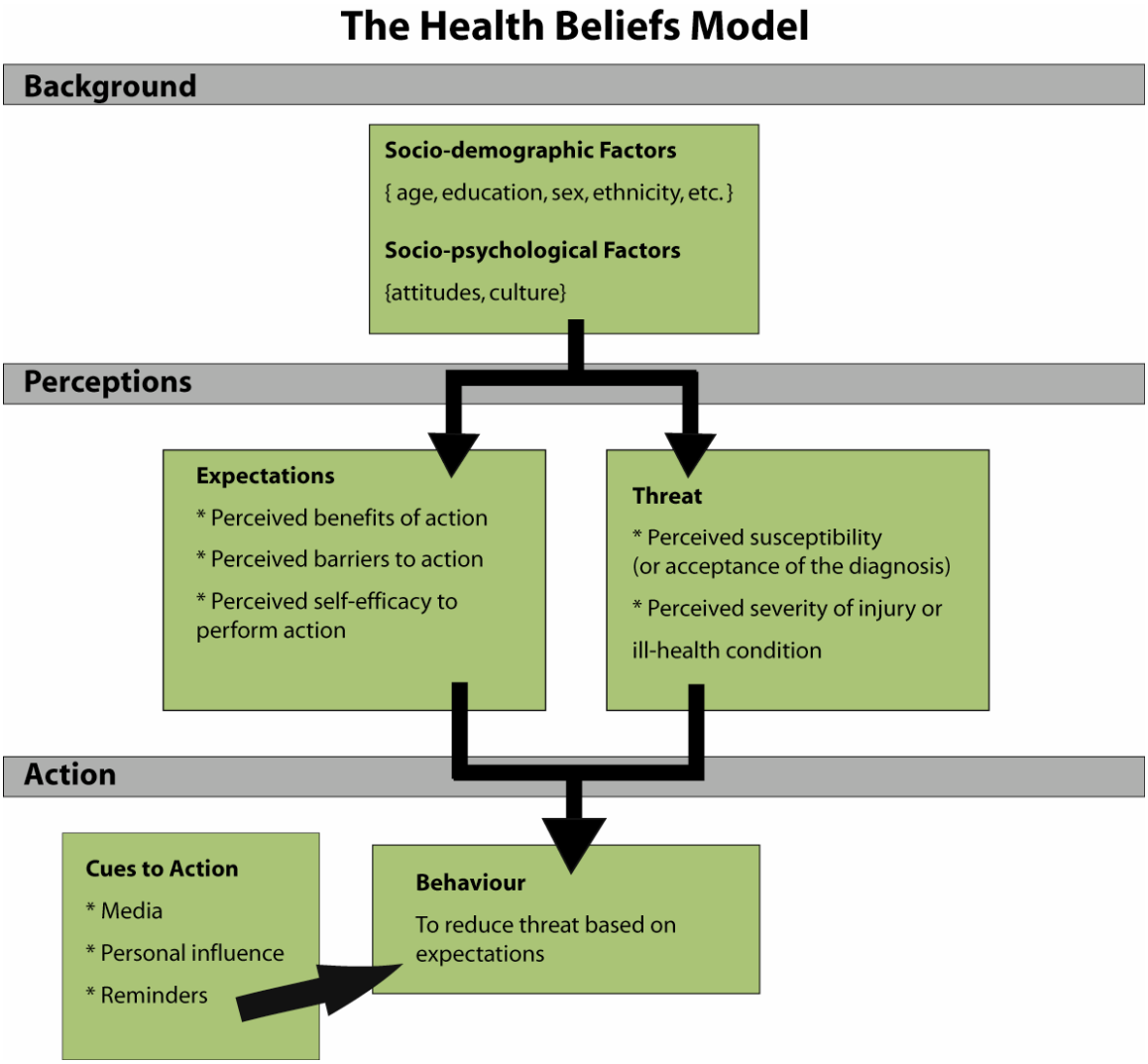
It is possible that recent OHS efforts have been affecting the agriculture safety record, and that without these efforts the incidence of injury and fatality could conceivably be far higher.

3. THE HEALTH BELIEF MODEL

This section gives a brief overview of the Health Belief Model as adapted to an analysis of the attitudes, beliefs and values that workers in the agriculture industry currently bring to the issue of safety in the industry—their safety culture.

3.1 The Health Belief Model in a safety culture context

The Health Belief Model suggests that a farmer's decision to change his or her safety-related behaviour is based on an assessment of the benefits of taking action weighed against the costs—their *expectations* of how likely it is to protect the farmer from injury. These assessments are informed by the farmer's belief about the likelihood of the injury occurring to them and their beliefs about the severity of the injury—the overall *threat* of injury.



The Health Belief Model suggests that farmers must feel that the change is something that they can actually do, whether by themselves or through a third party—*self-efficacy.* Provided all of these things are in place, then some kind of cue is needed to take action to change behaviour. The issue must become salient or relevant. Cues can come from a variety of sources, for example a television or newspaper article, the death or injury of someone close (or perhaps a high profile person), or comment from a significant person (Naidoo and Wills, 2000).

Essentially, the model suggests that, for behaviour change to take place, a farmer:

- needs an incentive to change
- must feel threatened by the likelihood of injury
- must believe that a change will be beneficial and have no (or few) adverse consequences, and
- must feel competent to make the change or undertake the required action.

3.2 Why use the Health Belief Model?

The Health Belief Model[1], originally proposed by Rosenstock (1966) and modified by Becker (1974), attempts to explain and predict health behaviours by focusing on the attitudes and beliefs of individuals. It was one of the first models that adapted theory from the behavioural sciences to health problems, and it remains one of the most widely recognised conceptual frameworks of health behaviour. The Health Belief Model was initially developed as part of an effort to explain the lack of public participation in health screening and prevention programs in the United States. Since then it has been used to explore a variety of health behaviours in diverse populations in Australia and elsewhere, including cancer screening, vaccination uptake, compliance with medical advice, and sexual risk behaviours.

The Health Belief Model's major strength is in its ability to highlight the range and complexity of factors involved in attempting to modify health-related behaviour. It therefore offers a useful framework for analysing the barriers and drivers in the health and safety-related behaviour of Australian farmers, focusing in particular on the role of beliefs, attitudes and values.

The model has served as a fieldwork tool, helping to determine the issues put to farmers. It also serves as an analysis tool in determining how behaviour change may be accomplished to build on and improve the current industry safety culture. The model can also be used to design safety messages that work with farmers' beliefs, attitudes and values rather than inadvertently working against them. The appropriate mix of health messages provided to farmers, as well as the messages' overall content can be assisted by the application of the model to the issues.

[1] For a more detailed explanation of the Health Belief Model in a safety culture context see www.monash.edu.au/muarc/IPSO/safebk/Appx_A.pdf.

3.2.1 Limitations of the model

The model is not without its limitations however. For example, it has been criticised for not taking into consideration other factors, such as environmental or economic factors, that may influence health behaviour. These factors clearly play a significant role in farmers' belief in the importance of safety, and have a strong bearing on their capacity to work safely at all times.

4. IMPLICATIONS FOR OHS INITIATIVES

Improving the health and safety of Australia's farm workers is a complex task and one that will require a multi-faceted approach. Chapter 2 examined the barriers to improving the health and safety of Australian farmers. This section explores how an analysis of the study findings using the Health Belief Model as a broad framework can help influence farmers' current safety culture. It is also important to accept that there are a range of factors outside the influence of OHS policy makers and practitioners.

4.1 Implications of the Health Belief Model

According to the Health Belief Model (the Model) there are two key conditions that must be met before there is a possibility of affecting farmers' safety behaviour:

- in farmers' minds, the benefits of any safety behaviour or modification must outweigh the barriers, and

- farmers must feel personally threatened by an injury that they believe will have serious repercussions on themselves, their family or their farm lifestyle.

4.1.1 The benefits minus the barriers equation

The Model suggests that in order to influence farmers' behaviour the sum total of the benefits of safety action must outweigh the barriers. It is clear from the findings of this study, detailed in Chapter 2, and in many other published reports that farmers see the barriers to enhanced safety measures very strongly outweighing the benefits. Indeed, farmers had difficulty in identifying particular benefits of enhanced safety measures.

4.1.2 The strength of the threat

It is also apparent from the study findings that the strength of the threat is not sufficient to move many farmers to action. The findings suggest that many farmers do not believe that they, personally, are under threat of an accident or injury—'*it won't happen to me*'.

Additionally they also do not perceive that any accident or injury is likely to be sufficiently serious such that it could threaten their life or their farming lifestyle.

4.1.3 Conclusion

Applying the findings to the Model we can say that farmers do not see injury as personally threatening, and they see more barriers to working safely (cost, time) than they see benefits. In order to increase safety-related behaviours amongst farmers, this balance will need to be shifted.

4.2 The right mix of strategies

The more successful injury prevention programs—for example, the road safety program—have generally implemented a mixture of education (mostly mass media), environmental (including product redesign) and legislative and enforcement strategies. An important challenge in farm safety is to design the right mix of strategies and countermeasures that produces the safest farm work environment, systems and behaviours which are compatible with the other needs of farmers such as high productivity. (Day et al, 1999).

Much effort has been directed towards environmental strategies—improving the safety of farm work through hazard reduction strategies including product redesign—and legislative and enforcement strategies. In recent years there has also been an emphasis on education, the Managing Farm Safety program is just one example. These activities are important, and as discussed in section 2.7, it is possible that they have already had an impact on the accident and injury rate.

However, there is a great deal of research which suggests that increased knowledge does not by itself necessarily result in changes in actual behaviour and injury reductions. To date there has been less of a focus on the influence of attitudes on the behaviour of farm workers. An examination of the Model suggests that there is a need for a carefully planned safety awareness raising campaign in the agriculture industry in order to foster behaviour change.

4.3 Promoting a safety mindset (shifting attitudes)

The application of social marketing techniques offers an opportunity for influencing farmers' attitudes and behaviour towards safety on the farm. Social marketing is being used increasingly by health promoters in Australia and elsewhere to encourage people to choose healthy or safe behaviours. Social marketing need not require expensive mass media campaigns; the principles can be applied through a range of approaches including local radio and newspapers and farm association/industry newsletters.

4.3.1 Some basic principles

There are some suggested basic principles in promoting a shift in attitudes and behaviour that should be kept in mind:

- a social marketing campaign should form one part of a coordinated, systematic approach to increasing the safety culture in the industry; and

- in an effort to improve and expand the knowledge/evidence base, all funding should be linked to high quality evaluation of the processes and outcomes achieved.

4.3.2 Increasing the threat of injury

It is clear from the study findings that safety marketed simply as '*keep yourself safe*' will not resonate with farmers—many farmers believe that risk is part and parcel of farming.

One strategy for increasing the perceived threat of injury is to link the implications of an injury to those factors which are high priorities for farmers, such as financial or lifestyle

issues. For example, a serious injury could leave them unable to work on the farm and suffering financial hardship. One farmer made the following observation:

> *'It's no cheaper to run a business safely but it's a lot more expensive if you have an accident.'*

There is a fine line to tread when creating awareness and anxiety raising campaigns. It is most important that it is done in such a way as to not induce excessively high stress levels among farmers; this would be both unethical and would not result in the desired change. Indeed, putting people under excessive stress may well increase the incidence of accidents and injury. (There are many studies in the health field which demonstrate an 'optimum level of concern'. If people are too worried they will avoid or switch off to the message.) The 'Road Safety' campaigns in some states and territories are good examples of raising the threat of injury, as was the 'look up for power lines' campaign.

Messages that raise awareness alongside positive outcomes could be useful, for example: '*A moment of carelessness could cost you your life or your livelihood—stop, think, and save your life.*' or *'I know that accidents do happen, but I know I'm doing everything I can to reduce the risk.'*

An important component of any campaign to influence farmers' attitudes and behaviours is that it also provides realistic and practical advice or information on steps that can be taken to improve safety on the farm. Ideally, the information should emphasise solutions that are low or no cost, and that can be easily undertaken by farmers themselves wherever possible. The message about workable solutions does not have to accompany the awareness-raising, but it should be part of the coordinated approach. Raising anxiety levels without offering workable solutions can create unwanted, excessively high stress.

The campaign might best be localised, undertaken through respected farmer associations/organisations, local farm safety action groups, and local rural service providers. The rural media should be used to provide the safety messages in a regular and systematic manner.

During the study it was obvious that farmers were very interested in and cautioned by stories of accidents or injuries to local farmers. Using the local media to publicise the accident and reminding farmers of appropriate safety solutions appears to be a highly efficacious method of raising awareness coupled with information on effective solutions.

Sessions on local radio with local farmers talking about things that have happened to them—a close call, a near miss or a recent accident—and providing workable solutions to prevent others from experiencing the same fate should be very well received.

The local campaigns can also take a commodity-specific flavour, where say the most potentially dangerous piece of equipment used by farmers in the area could be highlighted with tips on what to do and what not to do.

Short segments or documentaries on popular country television shows such as the ABC's Landline could reinforce the localised campaigns.

4.3.3 Perceiving the benefits as outweighing the costs

For the social marketing to be effective it will be important to carefully identify the benefits of safe work practices so that these can be incorporated into the message.

Economic stress is a key issue for farmers and, at the moment, safety equals cost in many farmers' minds. It may be possible to turn this perception to advantage in the campaign. One method of doing so is to remind farmers of the potential cost of injury in time off work, the need to employ others to do your work, etc. These should be quantified wherever possible.

Accurate costs of farm safety measures coupled with the average lost working time and cost to the farmer of the injury should be included when specific safety measures are being promoted.

Messages that market farm safety in a way that links it to the issues that farmers value, such as improved productivity and maintenance of the farm family lifestyle can also be expected to be successful.

Where there are demonstrable benefits over costs in particular safety modifications, these benefits should be clearly spelled out in dollar terms. Safety-related projects that are low cost, and particularly if they are also do-it-yourself, are likely to be highly appealing to farmers and should be widely advertised through the methods suggested above—local media, local farm safety groups, local organisations such as the Lions Clubs, etc.

Some safety experts spoke of the potential safety benefits of insurance incentives that are offered to farmers who have completed a safety training course or have safety accreditation for their farms. The incentives could be by way of reduced premiums or a 'no claims bonus', similar to that offered for motor vehicle insurance. Some companies may already offer these incentives. Where these incentives exist, they could be more widely advertised to farmers. There would also seem to be the potential for negotiation with other insurance companies to increase the availability of this type of incentive.

4.4 Linking to farmers' values

Understanding farmers' values and the positive aspects of farming is an important consideration in encouraging farmers to take on the safety message. The tone of the message needs to be consistent with, not antithetical to, those qualities admired by farmers: autonomy and self-reliance. One of the difficulties with current OHS approaches is that farmers perceive them as being somewhat authoritarian. Many of the interviewed farmers said they resented being told what to do.

We suggest that skilled social marketers should be able to build local campaigns that build on those qualities and aspects of farming that most farmers can relate to.

4.4.1 Autonomy

Autonomy is highly prized by many farmers. We recommend that local safety campaign messages build on that sense of autonomy, using it as a springboard for decisions to change behaviour.

4.4.2 The farmer as expert

It is important that those delivering safety messages or providing advice or information on how to do something safely be credible to farmers. Unfortunately there is a somewhat negative view towards those the farmers call 'the OHS people'. When the 'OHS people' are not farmers, goes the reasoning, they do not understand the pressures and realities of day-to-day life on the farm.

> *'Look, I know these people have a job to do. But frankly, what do they know about what it's like to be a farmer?'*

Campaigns should be able to build on these perceptions, presenting 'expert farmers' who can credibly advocate for changes in safety behaviours.

4.4.3 Minimise the emphasis on legislation and enforcement in the short-term

It appears that legislation and enforcement have recently been highlighted in some states. It is obvious that legislation for safety is a very important plank in the enhancement of a safe work environment. We simply suggest that in the current circumstances, consideration should be given to how the information is conveyed, and that it should be balanced with other, more positively framed strategies.

4.5 Targeting the message

The study findings suggest that specific safety messages could be targeted to some groups that are particularly open to the message and to some vulnerable groups of farmers.

4.5.1 Target some safety messages to women

In one study almost a quarter of respondents suggested that farm women should be an important target group for safety training '*because they were judged to be more receptive and capable of stimulating safety changes of the farm*' (Day et al, 1999). Women have also been identified as early adopters of safety changes. Many farmers in this study suggested that women were more aware of safety issues. They also pointed out that children could be a powerful motivator for change.

> *'We're now getting the message through the right door—to the females in the family.'*

> *'My wife is very keen on keeping me safe, she always chases me to put something* (sunburn cream) *on my nose.'*

> *I think the kids are important. Mine are always on at me about safety things they learn at school.'*

4.5.2 Target older farmers

The statistics on the ageing of the agriculture workforce are compelling. Many of the older farmers in this study admitted that they were less able to easily undertake some tasks around the farm. A skilfully worded safety message that is sympathetic to their dilemma could potentially achieve a great deal of behaviour change in the older farmers.

4.5.3 Targeting other farmer groups

Many farmers in this study said that they occasionally sought safety-related information from people who serviced the agriculture industry. The inclusion of safety as a focus could be a useful strategy.

4.5.4 Locally delivered messages can be both cheap and effective

The findings of the study suggest that small scale, low key safety campaigns run by local groups and undertaken where the farmers gather could assist farmers to take the safety message personally, for example at field days and sale yards.

4.5.5 Potential small scale program initiatives

Should funds be available, the findings of the study also support a submission-based program initiative inviting local safety groups or clubs to put together proposals for improving the safety culture in their area. In line with the basic principles, submissions should be required to provide for effective evaluation of the outcomes as a condition of funding.

4.6 Improving knowledge and awareness through education and training

A great deal of work has already been put into the safety education and training effort. There are some excellent internet web sites, brochures, booklets and courses. Many of the key success points are already well known. The findings of this study in the area of education and training are, for the most part, consistent with the findings of other studies. Nevertheless, it may be worthwhile to repeat some of the key points made by the interviewees for this study.

4.6.1 Informal, practical teaching, local initiatives

Farmers will be most engaged when the information imparted is of immediate and practical benefit to them. They are also most likely to become involved when the information is provided in places where they are already gathered, for example at field days, the sale yards and activities such as Lions Club meetings.

Hobby farmers should be a target for increased education. Many experienced farmers have pointed out that they fear hobby farmers will injure themselves because of their lack of experience and training.

When educating farmers regarding legislative changes, many interviewees indicated that they would prefer the balance of the training to concentrate on teaching the practical skills that the legislation requires rather than on the rationale for the legislation. In short, it

appears that at all times and in all circumstances there is an expressed preference for practical and focused skills training.

There seems to be some tension between the expressed preference for the practical, small scale localised initiatives and the incorporation of competency-based, formal safety training and risk management in formal agricultural training programs.

For example, the *Managing Farm Safety* program, put together by Farmsafe Australia and the Rural Industries Research and Development Corporation started out as a one day course for farmers. It was subsequently expanded to a nationally accredited, two day program of two modules with a further two elective modules that farmers could undertake. It seems possible, from the information gathered in this study, that this expansion and emphasis on competency-based training may well act as a deterrent to some farmers undertaking the course.

In general, it seems that some trainers feel caught between their preference for providing small scale, localised initiatives and the national push for greater competency-based and accredited training. This could usefully be further investigated.

4.6.2 Involve farmers in the design and delivery of courses

To the extent that it is possible to do so, involving farmers in the planning and delivery of safety initiatives is likely to give greater credibility to the information being provided. It is important to remember that whilst there may be many unsafe practices on farms, there are also farmers with a lot of expertise and knowledge. Identifying and involving these farmers in local safety initiatives is one way to enhance credibility. For example, we believe that a demonstration of how, say, to drive an ATV safely, conducted at the local sale yards by a local farmer with expertise would be very well received.

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