

# FARM HEALTH & SAFETY TOOLKIT

*For Rural General Practices*

A resource compiled by the Australian Centre for Agricultural Health and Safety, University of Sydney

Funded by the Commonwealth Department of Health and Ageing

# THE FARMER HEALTH CHECK-UP CHECKLIST FOR GENERAL PRACTITIONERS

## SPECIFIC HEALTH RISKS\*

### RISK OF LIFE-THREATENING INJURY ON FARMS AND ROADS

- Check medications, neurology and mobility

- Double the rate of transport accident deaths amongst male farmers and farm managers<sup>1</sup>
- Very high rates of on-farm injury and death in male farmers and farm workers<sup>1,2,3</sup>

### RISK OF SUICIDE

- Early assessment of mental health symptoms and effective suicide risk management, including access to means of suicide

- Risk of suicide in male farmers and managers increases with age. More than double the Australian male suicide rate for those 65 yrs+<sup>1</sup>
- High rates of suicide in young male farm workers<sup>4,5</sup>

### RISK OF EARLY DEATH FROM CARDIOVASCULAR DISEASE

- Early cardiovascular health monitoring

- 40% higher rate of death from cardiovascular disease for male farmers and farm managers<sup>1</sup>

### RISK OF LIFE-THREATENING SKIN CANCER

- Regular skin checks, early investigation of lesions

- 60% higher death rate due to melanoma and other malignant skin cancers, male farmers/ managers<sup>1</sup>
- Skin cancer deaths in older farmers more than double the rate of other Australians (65yrs & over)<sup>1</sup>

### RISK OF PROSTATE CANCER DEATH

- Prostate pathology history and screening

- More than double the risk of death from prostate cancer in male farmers and farm managers<sup>1</sup>

### RISK OF DEATH FROM CANCERS OF THE COLON AND RECTUM

- Bowel health history and early assessment of symptoms

- 40% higher rate of deaths from cancer of colon and rectum, male farmers and farm managers<sup>1</sup>

### RISK OF LYMPHATIC/HAEMOPOIETIC CANCER DEATH

- Early assessment of symptoms, blood monitoring

- Almost double the death rate due to cancers of haemopoietic and lymphatic systems<sup>1</sup>

### RISK OF HEALTH EFFECTS OF ORGANIC DUSTS

- Ask farmers with asthma about dust exposure

- Exposure to grain and animal dusts can trigger serious asthma episodes in affected farm workers<sup>6</sup>

### RISK OF ZONOTIC DISEASE AND ARBOVIRUSES

- Consider zoonoses in case of febrile illness

- Exposure to farm animals is a risk factor for Q-fever, leptospirosis, cryptosporidiosis, Ross River Fever and other zoonotic diseases<sup>6</sup>

### RISK OF HEARING LOSS

- Consider hearing difficulties and noise exposure as indicators for a full hearing assessment

- Around two-thirds of farmers have a measurable hearing loss and around 50% have tinnitus<sup>7</sup>
- Hearing loss commences in youth exposed to farm noise, including firearms<sup>7</sup>

\*NB Higher death rates expressed as percentages or 'double' refer to working age male farmers and farm managers aged 25-74 years, unless otherwise specified. Occupational coding within ABS Deaths Data is likely to be more reliable for this group, compared to farm workers, older and younger age groups © Australian Centre for Agricultural Health and Safety 2009

1. Depczynski J, Fragar L (In preparation) *Causes of deaths of Australian male farmers and farm managers 1999-2002*

2. Pollock K, Fragar L, Morton C. *Traumatic deaths in Australian agriculture – the facts*. Rural Industries Research and Development Corporation 2007

3. Page AN, Fragar LJ. *Suicide in Australian Farming, 1988-1997*. ANZ J Psychiatry 2002;36

4. Fragar L, Henderson A, Morton C, and Pollock K. *The mental health of people on Australian farms – The facts*. RIRDC & ACAHS Kingston 2007

5. Fragar L, Franklin R, Gray L, Petruskas V. *The health of Australian farming populations – a vignette*. in *Rural Public Health in Australia 1997 – proceeding of the National Rural Public Health Forum*

6. Fragar L & Franklin R *The health and safety of Australia's farming community* RIRDC & ACAHS 2000

7. Farmsafe Australia. *Noise injury prevention strategy for the Australian farming community* ACAHS & FSA 2002

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# INTRODUCING THE TOOLKIT

**F**arm health and safety is a significant problem in rural Australia. Farmers are at higher risk of fatal injury, cardiovascular disease, some cancers and suicide. They are also prone to other unique injuries and conditions associated with life and work in agriculture.

The *Farm Health and Safety Practice Toolkit* provides summary information on farm health and safety, to assist General Practitioners in their interactions with farmers. The Kit includes:

## **THE FARMER HEALTH CHECK-UP CHECKLIST FOR GENERAL PRACTITIONERS (A4 CLINIC MEMO)**

### **SECTION 1: INFORMATION ABOUT FARMERS HEALTH AND SAFETY - FOR GENERAL PRACTITIONERS**

- 1.1. An overview of farmers health
- 1.2. Common farm injuries seen in General Practice - Hands and eyes
- 1.3. Farmers mental health and suicide risk
- 1.4. Pesticides and farmers health
- 1.5. Zoonoses
- 1.6. Hearing loss in farmers
- 1.7. Health and safety of older farmers
- 1.8. Rehabilitation and return to work on the farm following injury

### **SECTION 2: FARM HEALTH AND INJURY PREVENTION RESOURCES**

#### **TAKE HOME CHECKLISTS - FOR FARMERS**

- 2.1 Farm workshop safety
- 2.2 Tractor safety
- 2.3 Farm machinery safety
- 2.4 Farm vehicles, 2 and 4 wheeled motorbikes
- 2.5 Child safety on farms
- 2.6 Farm noise and hearing loss
- 2.7 Asthma management on farms
- 2.8 Zoonoses

#### **CLINIC POSTERS - FOR RURAL GENERAL PRACTICES**

- Farmers - Preventing Injury
- Farmers - Checking Your Health

#### **PREVENTING FALLS FOR OLDER FARMERS RESOURCE (CLINIC COPY)**

Information in the toolkit is based on currently available research evidence on farm health and injury; conducted, reviewed or compiled by the Australian Centre for Agricultural Health and Safety. It does not provide clinical or treatment advice, for which Practitioners are referred to the latest systematic reviews or their College, Association or Medical Faculty.

We do hope you find the resource helpful in your everyday dealings with farmers. For further information contact:

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# SECTION ONE

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# AN OVERVIEW OF FARMERS HEALTH



## PROBLEM:

The health of farmers and farm workers is generally worse than other Australians. Farmers and farm workers have high incidence or risk associated with the following:<sup>1 2 3 4 5 6</sup>

- Cardiovascular disease, including acute myocardial infarction
- Some cancers - prostate, colo-rectal, melanoma, lymphopoietic and haematopoietic cancers
- Zoonotic disease - incl. Q fever, cryptosporidiosis, leptospirosis
- On-farm injury
- Road traffic accidents
- Hearing loss
- Suicide



## CONTRIBUTING FACTORS ARE LIKELY TO INCLUDE:<sup>6 7 8</sup>

- Difficulty accessing primary health care services
- Environmental factors, including working with machinery, livestock, exposure to sun, noise, viruses and travel on roads of comparatively poor standard
- Working in isolation, that increases risk of injury and time involved accessing care
- Lifestyle factors. Reports have shown that many rural Australians have high rates of alcohol consumption, daily smoking, overweight-obesity. Farmers may or may not reflect these patterns
- The average age of farmers. In 2001 this was 51yrs and continues to increase
- Periods of drought, a changing rural economy and declining terms of trade, have increased financial, family and personal pressures on farmers and reported levels of mental stress

## ON-FARM PREVENTION:

Health and safety promotion programs encourage farmers to:

- Make regular appointments for GP health check-ups and hearing screening, particularly for those over 55 yrs
- Make changes to address key safety hazards -
  - > Reduce risk of road injury with attention to speed, fatigue, alcohol consumption and use of seatbelts
  - > Have all tractor and machinery guards in place and in good order
  - > Ensure on-farm use of seatbelts in vehicles and helmets when riding farm motorbikes
  - > Consider safer alternatives to a quad bike. Utes or small utility vehicles are better designed to carry loads and passengers safely
  - > Have available and use appropriate personal protective equipment (PPE) with firearms, chainsaws, chemicals and workshop tools (eg. earmuffs, safety glasses, gloves)
  - > Provide a securely fenced house yard for young children to play in, to prevent them wandering away into farm dams (drowning); or going near vehicles and machinery

1 Depczynski J, Fragar L (In preparation) *Causes of deaths of Australian male farmers and farm managers 1999-2002*

2 Fragar I, Franklin R, Gray L, Petrauskas V. The health of Australian farming populations - a vignette. *Rural Public Health in Australia - Proceeding of the National Rural Public Health Forum 1997*

3 Fragar L & Franklin R *The Health and Safety of Australia's Farming Community* ACAHS & RIRDC Moree 2000

4 Pollock K Fragar L Morton C *Traumatic deaths in Australian Agriculture - The facts 2007* ACAHS & RIRDC Moree 2007

5 Farmsafe Australia *Noise injury prevention strategy for the Australian farming community*. ACAHS & FSA Moree 2002

6 Fragar L, Henderson A, Morton C, and Pollock K. *The Mental Health of People on Australian Farms - The Facts* RIRDC & ACAHS Moree 2007

7 NSW Health *NSW Population Health Survey: 2006 Report on Adult Health* NSW Department of Health Sydney 2007

8 Barr N *The Microdynamics of Change in Australian Agriculture* ABS 2055.0 Canberra 2004

# COMMON FARM INJURIES SEEN IN GENERAL PRACTICE

## HANDS AND EYES<sup>9 10 11</sup>

People working in farm workshops are exposed to risk of injury and illness associated with a range of hazards. Around 20% of farm injuries presenting to hospital emergency departments are caused by farm maintenance work. More than 30% of these are hand injuries and a further 30% are eye injuries.

Hand injuries are most commonly in the form of cuts and lacerations, followed by fractures and crush injuries, with fingers most commonly affected. Burns, sprains and punctures also occur.

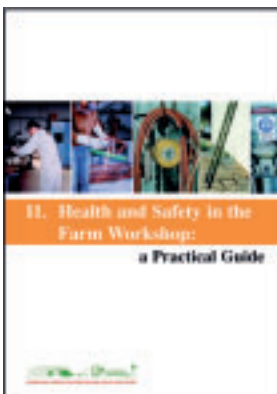
Eye injuries include burns, abrasions, contusions and perforation of soft tissue structures associated with blows to the eye and foreign bodies. Flash burns to the eyes can be a risk with welding.

Workers' compensation claims indicate that injury associated with powered equipment, tools and appliances are most often due to:

- abrasive / cutting tools (eg. bench saws and angle grinders)
- welding equipment (eg. arc and oxy-acetylene welding)
- chainsaws

Other farm activities associated with eye and hand injuries include general equipment maintenance, battery and tyre changing, using power hoists and tools, large machinery operation (eg. harvesting activity), slaughtering, fencing and shearing.

Injuries may require hospitalisation or ongoing outpatient treatment, with time off work impacting upon farm productivity.



## ON-FARM PREVENTION

- Check that the workshop is tidy and free from obstacles
- Replace and maintain guards on workshop equipment (eg. grinders)
- Always ensure relevant personal protective equipment (PPE) is available for use with powered equipment (eg. gloves, safety glasses or faceshield, hearing protection)
- Ensure first-aid kits are available in workshops and vehicles, with a good supply of clean pads, dressings and sterile saline for flushing loose particles from the eye
- In addition, make sure people using electrical equipment are protected by a functioning Residual Current Device (RCD)

<sup>9</sup> Eather J & Fragar L *Health and safety in the Farm Workshop. A Practical Guide* ACAHS Moree 2006

<sup>10</sup> Coleman R & Fragar L. *Hand injury* (Unpublished report) ACAHS Moree 1994.

<sup>11</sup> Fragar L and Thomas P *Machine injuries on Australian farms - The Facts* RIRDC and ACAHS Moree 2005

# FARMERS MENTAL HEALTH AND SUICIDE RISK

1.3

**M**ental health is a growing concern in farming communities<sup>1 12</sup>. Whilst reports of mental health disorders in farmers are generally low:

- Rates of suicide in farmers / farm managers increases with age
- Farmers over 65 years have double the suicide rate of other Australians of this age
- For agricultural workers, suicide is more common in younger age groups

Firearms are the most commonly reported method of suicide (45%).

## CONTRIBUTING FACTORS<sup>12 13 14</sup>

Reasons for suicide are complex, but life and work stressors significantly contribute to levels of distress reported by farmers.

- Levels of psychological distress are known to be associated with economic disadvantage
- Australian farmers are facing unprecedented financial pressure due to drought and declining terms of trade
- A farming sector undergoing change and the impact of an ageing population, have led to rural population decline, which in turn leads to:
  - > increased *physical and social isolation* for those who remain
  - > loss of rural services, including medical and mental health services

Prolonged stress can effect the ability of people to work and manage daily activities. Loss of concentration, exhaustion, indecision, and lack of energy are some of the symptoms of stress which can pose even greater risk of injury to people working in hazardous, isolated environments without supervision and support.

It is also important to examine the use of alcohol and other drugs, as these can have a considerable impact upon personal ability to manage at work; and on social support systems.

## FARMERS PRESENTING TO THE GENERAL PRACTICE

Rural people may find it more difficult to acknowledge, express or seek help for mental health problems such as depression than those in urban areas. With this in mind, be ready to:

- Identify and explore symptoms of psychological distress, anxiety and depression
- Provide access to and knowledge of counselling services and crisis lines
- Suggest removal or prevention of access to firearms by friends or family of those contemplating suicide

Where appropriate, the following questions may help to raise the topic of mental stress, depression and suicide risk with farmers. The assistance of Prof. Brian Kelly, Professor of Psychiatry, University of Newcastle, is acknowledged in the preparation of the next section.



<sup>12</sup> Fragar L, Henderson A, Morton C, and Pollock K. *The Mental Health of People on Australian Farms - The Facts*. RIRDC & ACAHS 2007

<sup>13</sup> *The NSW Farmers Mental Health Blueprint* [www.aghealth.org.au/blueprint](http://www.aghealth.org.au/blueprint)

<sup>14</sup> Fragar L, Kelly B, Peters M, Henderson A, Tonna A. *Partnerships to promote mental health of NSW farmers - the New South Wales Farmers Blueprint for Mental Health*. Australian Journal of Rural Health. 16(3):170-175, June 2008.



# FARMERS MENTAL HEALTH AND SUICIDE RISK



## BROACHING THE TOPIC OF MENTAL HEALTH AND SUICIDE RISK WITH FARMERS

**Disclaimer** - *The following prompts are meant as a general guide only and do not contain specific clinical advice endorsed by any professional association.*

### AN EXAMPLE OF A QUESTION SCHEDULE OR GUIDE

FEEL your way with general questions about practical, everyday things. The weather and prices are a good starting point. Then move onto general health and wellbeing.....  
.....then to more specific questions about health, stressors and how the patient is coping.

#### • How have things been going with the farm?

- > How has the weather been affecting the farm?
- > A lot of farmers are feeling stressed with drought, debt and rising costs in recent times. How have these affected you?
- > Any other particular worries with the farm?

#### • How have you been feeling generally?

- > How have you been sleeping?
- > Feeling more tired than usual?
- > Particularly nervous, restless or fidgety?
- > Are normal activities a real effort lately?
- > When did you last catch up with friends or mix socially?
- > Are there any particular health or social stresses?

#### • How have things been going with the family

- > Do you get to spend time with your family?
- > Are there any particular difficulties or pressures in the family?
- > Would you like to talk more about it?

#### • How have the stresses in your life been affecting you lately? For example..

- > What about your moods?
- > Do you drink alcohol? Are you finding yourself drinking more than usual?
- > How have you been feeling about the future ....
  - Have you been feeling miserable or fed up?
  - Do you feel you just want to give up on things - like, doing absolutely nothing or wanting to escape in some way?

### SUICIDAL THOUGHTS

Depending on the course of your discussion, you may identify clinical depression requiring treatment. It is important to be open and discuss potential suicidal feelings and you may need to ask more direct questions about suicidal thoughts. However, it is also important to lead into the discussion gently, by expressing your real concern. For example.....

“...Sounds like it’s been a very hard time for you. Can you tell me more about how you have been feeling...”

- Have you felt like you’d be better off not being around?  
(or) Have you felt like it wasn’t worth going on anymore?  
(or) Have you ever thought it would be better if you just ended your life?
- Have you thought about this lately?
- Have you thought about ways you might actually do this?
- Can you tell me more about this?



# FARMERS MENTAL HEALTH AND SUICIDE RISK



## TALKING ABOUT SUICIDE RISK MANAGEMENT WITH FARMERS

**Disclaimer** - *The following script is meant as a general guide only and does not contain any specific clinical advice endorsed by any professional association.*

### EXAMPLE SCENARIO-SCRIPT...

"...Based on our talk, I am concerned about how you've been feeling and the pressure you have been under. We need to take some definite actions to make things better. We can make things better and work on things together from here. ...

" Here's what I would like to do:

#### **1. Commence with some immediate treatment for your condition**

(Describe clinical management such as medications; possible hospital admission and / or drug and alcohol management)

I'd also like to.....

- Keep in regular contact, to check how things are going
- Keep an eye on your drinking (if applicable), as this can make matters worse

...Sometimes when people are feeling down, they find it hard to think clearly or make good decisions. Sometimes we need someone else to help us think more clearly about things, situations and feelings. For these reasons I would like to....

#### **2. Provide you with contacts for counselling and support services – and follow-up to make sure these work for you.**

- 24 hr Telephone Crisis Support Services:
  - > Lifeline (National) 24hr telephone service Ph. 13111424
  - > In NSW, Rural Mental Health Support Line Ph. 1800 201 123
- The local Mental Health Service (if available, +/- making the appointment)

#### **3. Contact a friend or family member NOW and ask them to come in with you LATER TODAY or as soon as possible to:**

- Talk about ways they can provide practical and emotional support (eg. keeping company to reduce the time spent alone, helping out with a job, taking a break, being a 'mate')
- Give them some information to help them understand what is happening with you

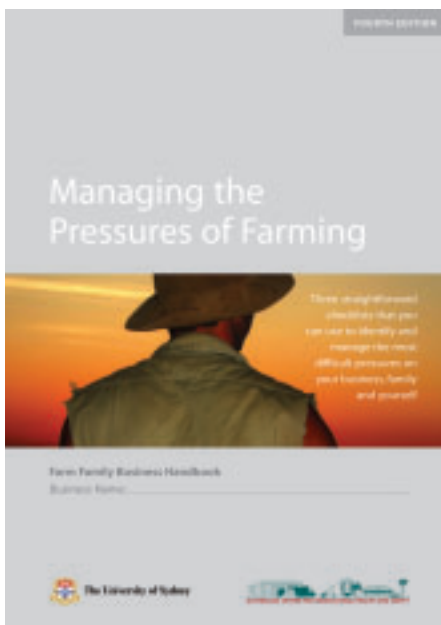
**Please note:** Most farmers have ready access to firearms - the most common method of suicide. Based on your assessment of the person's suicide risk, you may need to consider whether temporary removal of firearms is recommended in the short term. If so, it is important to:

- Suggest to the person that everyone, family, friends and yourself included, will be reassured by temporary removal of firearms - just until things settle down
- That this is a simple process of signing over responsibility to another person in the short term, such as a family member or friend (call in to local police for paperwork)

Some farmers may be resistant to the suggestion of firearms removal - so be sensitive to this possibility. If dealt with sensitively, and with a view to working together on helping them through this period safely, it need not jeopardise the a good doctor-patient relationship, which is essential for lasting and effective treatment.

# FARMERS MENTAL HEALTH AND SUICIDE RISK

**M**any groups in the community have a role to play in promoting the mental health and wellbeing of farmers. *The NSW Farmers Mental Health Blueprint*, provides a summary of key issues and major actions that can be taken by a range of agencies, to reduce mental ill-health and risk of suicide in farmers. Go to [www.aghealth.org.au/blueprint](http://www.aghealth.org.au/blueprint) for further information.



## ON-FARM PREVENTION

**T**reatment interventions alone cannot reduce the personal, social and financial burdens associated with mental health problems. Building resilience to enable farmers to better manage and withstand pressures, is an important element within the Blueprint.

*Managing the Pressures of Farming*<sup>15</sup> resource is a business management tool that aims to enhance resilience in farmers by providing information on the most difficult pressures that affect the farm business, family and personal life. Practical tips are given towards managing these pressures.

To view the resource go to:  
[www.aghealth.org.au/pressures](http://www.aghealth.org.au/pressures)

# PESTICIDES AND FARMERS HEALTH

**P**esticides refer to insecticides, herbicides, fungicides and other chemical substances which destroy, repel or control pests to plant and animal production. Whilst the vast majority of pesticide poisoning in Australia actually occurs in the home, pesticides are commonly used on farms and precautions need to be taken to protect farmers from pesticide poisoning.



The effects of exposure to pesticides are sometimes difficult to determine - due to long latency periods for chronic illness; difficulty in diagnosis; non-specific health effects; and lack of effective monitoring systems. Absorption can occur through the skin, through inhalation or ingestion. Accidental poisoning most commonly occurs through skin absorption.<sup>16 17</sup>

## PREVALENCE OF PESTICIDE POISONING<sup>16 17 18</sup>

Pesticide exposure can result in transient or mild symptoms such as headaches, rashes and stomach cramps requiring time off work. While accidental pesticide poisoning is not common, the organophosphate / carbamate group of insecticides is reported to be the most common cause of death from pesticides in Australia. This is followed by the herbicide / fungicide group and arsenic poisoning.

Most fatal pesticide poisonings (85%) are intentional (suicide), though only around one quarter of these are farmers or agricultural workers. Intentional pesticide poisoning in Australia represents only 0.5% of all suicides.

Around 470 hospital admissions / year are due to the "Toxic Effect of Pesticides". Two thirds are male and over half are children aged 0-4 years. Organophosphates are responsible for about 40% of these, followed by rodenticides (20%) and herbicides / fungicides (10%). Workers compensation claims most often relate to herbicides and single dose chemical exposures. Horticultural and fruit growing industries are responsible for most claims.

Calls to the *Poisons Centre* relating to pesticide exposure number around 13,000 across Australia each year (6% of total calls). Most inquiries relate to children (52%) and commonly concern anticoagulant rodenticides, pyrethrin, organophosphate and borate chemicals.

**Acute poisoning** from organophosphates results in a cholinergic syndrome caused by acetylcholinesterase inhibition. Diagnosis is based on the clinical signs and symptoms, measurement of inhibition of erythrocyte acetylcholinesterase and/or plasma cholinesterase activity. Antidotal treatment consists of airway management and oxygenation; intravenous atropine; possible administration of Pralidoxime; and concurrent decontamination.

**Chronic exposure** to pesticides may cause cancer, skin problems, nervous system disorders, blood and liver disorders, allergic effects and reproductive disorders. In particular, chronic organophosphate exposure can cause damage to the peripheral nerves and the nervous system which can affect mental health, memory and concentration.



<sup>16</sup> ACAHS *Farm Chemicals. Agricultural Health Guidance Note Series No. 13.* ACAHS. Moree 1997

<sup>17</sup> Fragar L, Sankarin B & Thomas P *Pesticides and Adverse Health Outcomes in Australia* RIRDC & ACAHS 2005

<sup>18</sup> Reigart J and Roberts J. *Recognition and Management of Pesticide poisonings (5th edn).* US Environmental protection Authority 1999.

# PESTICIDES AND FARMERS HEALTH

## MANAGEMENT AND REPORTING REQUIREMENTS FOR PESTICIDE POISONING

A useful resource is available for medical practitioners by Roberts & Reigart entitled *Recognition and Management of Pesticide poisonings (5th edn)*. The resource can be freely downloaded from [www.epa.gov/pesticides/safety/healthcare/handbook/handbook.htm](http://www.epa.gov/pesticides/safety/healthcare/handbook/handbook.htm)

The Australian Pesticides and Veterinary Medicines Authority (APVMA) maintains an online database of agricultural and veterinary chemical products registered for use in Australia, including product name and category, registering company and active constituents.



### ON-FARM PREVENTION:

On farm prevention will vary according to the needs of each farm, but recommendations include:

- Alternative pest management eg. crop rotation, genetically modified strains
- Safe storage systems - eg. locked shed with impervious flooring and bunding to contain spills
- Use of less toxic chemicals or application systems (eg. backlining vs. dips)
- Follow safety precautions and recommendations listed on the Material Safety Data Sheet (MSDS)
- Good ventilation and mechanical systems for decanting and mixing, rather than doing this manually
- Use appropriate PPE (eg. gloves, boots, overalls, goggles, ventilation mask)
- Ensure wash facilities are available and are used after handling pesticides and for decontamination
- Check weather conditions for wind and temperature prior to application
- If any symptoms of poisoning occur such as chest pain, nausea, blurred vision, excess saliva in the mouth, or difficulty in breathing, stop work immediately and seek medical advice. Wash exposed skin thoroughly
- Regularly monitor cholinesterase blood levels of workers
- Farm managers and workers undertake ChemCert training for safe handling of pesticides and other chemicals

### IMPORTANT NOTE:

All cases of adverse health effects due to pesticides, need to be reported to the APVMA. Please complete and submit the online reporting form at [www.apvma.gov.au](http://www.apvma.gov.au)



# ZOONOSES

**Z**oonoses are animal diseases that can be passed onto humans. Zoonoses such as Q Fever, cryptosporidiosis and leptospirosis, affect thousands of people each year in Australia. Those at high risk include abattoir workers, veterinarians, shearers and farmers who have regular and close contact with animals. Symptoms can be mild or progress to serious illness with long term health affects. For patients with flu-like or gastro-intestinal illnesses who have regular contact with farm animals, consider the following zoonotic diseases.



## FEBRILE ILLNESSES OF ZOOTIC ORIGIN <sup>3 19 20</sup>

### Q Fever

Q fever infection is caused by the bacteria *Coxiella burnetii* and is the most common zoonotic disease in Australia. It can survive long periods in animal environments and farm dusts, with people generally infected by inhaling air or particles contaminated with excreta or birth fluids of infected animals.

Abattoir workers, veterinarians, farmers and others that handle livestock (eg. shearers, hunters) are at highest risk. Cattle, sheep, goats, domestic pets, rodents and kangaroos are known carriers of the disease. The severity of illness varies from mild flu-like symptoms, to more serious organ involvement of the heart (endocarditis), lungs (pneumonitis) and liver (abnormal liver function). Chronic fatigue syndrome can also develop, with disabling consequences.

### Leptospirosis

Leptospirosis is caused by the bacteria *Leptospira interrogans*. It is most commonly found amongst abattoir workers, dairy workers, banana and sugarcane growers and other farmers. Humans contract the disease when skin and mucous membranes are exposed to the infected urine of cattle, pigs, dogs or rats. Symptoms include sudden onset of fever, malaise, headache and nausea, however effected persons may also develop a petechial rash, jaundice and renal failure. The illness may also present as meningitis.

### Brucellosis

Brucellosis, caused by the *Brucella* group of bacteria, is unlikely to be the cause of febrile illness, due to extensive eradication programs in cattle herds in recent decades. Isolated cases, however, may still occur. Transmission occurs mainly through contact with infected feral pigs; by inhalation of infected droplets or dust; through contaminated milk; or direct contact of mucous membranes and skin with infected animal discharge. As well as common flu-like symptoms, depression and chronic fatigue may develop and recur over several years.

### Early detection, treatment and prevention of zoonotic febrile illnesses.

Diagnoses of these illnesses is confirmed through laboratory analysis. Antibiotics are usually indicated to prevent the more disabling consequences of these illnesses. A vaccine for humans is available for Q Fever (QVax) but requires a skin and blood sensitivity test before administration. It is recommended for high risk occupational groups, including farmers and others who regularly handle or transport livestock.

A clinical diagnostic guide for zoonotic illness is available on the Hunter Area Pathology Service website of Hunter New England Area Health Service at [www.haps.nsw.gov.au](http://www.haps.nsw.gov.au)

<sup>19</sup> Hunter New England Health Population Health. *Q Fever. Communicable Diseases Bulletin* Vol 175 2008

<sup>20</sup> Australian Safety and Compensation Council *Work-Related Infectious and Parasitic Diseases Australia* ASCC Canberra 2006

# ZOONOSES

## OTHER ZOOBOTIC DISEASES<sup>21 22</sup>

### Cryptosporidiosis

**C**ryptosporidiosis is a diarrhoeal disease caused by the parasite *Cryptosporidium*. It is present in the faeces of infected animals. The organism is more common in warmer months and in wet conditions, around watercourses, dams, troughs and drains. *Cryptosporidium* is passed onto humans through ingestion of contaminated water, food and through handling of infected animals such as scouring calves. Symptoms include watery diarrhoea, cramps, fever, nausea and vomiting which can last up to two weeks. Diagnosis is made on laboratory analysis of stool specimen. If well hydrated, the illness usually resolves itself, but can result in considerable discomfort and downtime. The illness is easily spread through close contact with other workers, families, schools, daycare centres and public swimming pools. Public health authorities recommend a period of absence from public facilities and food handling until 1-2 days after diarrhoea has subsided.



### Hydatid disease

Hydatid disease is caused by the tapeworm *Echinococcus granulosus*. Its primary hosts are dogs and foxes, where adult parasites reside and shed eggs in faeces which are then ingested by livestock or wildlife. For humans, ingestion occurs through animal handling. The eggs hatch and travel through the gut wall, into the bloodstream to the liver, lungs and brain where they form cysts of hydatid worms. Hydatid cysts in humans are a serious disease which may take years to develop and requires careful surgical removal, to ensure brood capsules are not disseminated throughout the body.

### On-farm prevention

Reducing risk of zoonotic illness will include attention to elimination, isolation and hygiene measures.

- Elimination through vaccination programs:
  - > In animals eg. brucellosis in cattle, de-worming dogs
  - > In humans eg. Q fever vaccination
- Separation or isolation of workers from physical contact with animal body fluids:
  - > Use of machinery (preferably cabined) to clear manure and feed waste build-up in sheds, yards and lane areas where animals are regularly kept or moved
  - > Limit unnecessary physical contacts with animals (eg. mechanised crushes, good yard design, no children or bystanders in yards)
- Use of personal protective equipment (PPE) – gloves, masks, waterproof boots, overalls
- Attention to thorough hand washing after handling animals and before handling food – including provision of hand washing facilities for all workers

# HEARING LOSS IN FARMERS

## FARM NOISE INJURY: 22 23 24 25

People who live and work on farms are exposed to a range of noise hazards in the daily operation of the farm. Many of these can result in excessive noise exposure beyond safe levels. Farm noise hazards include chainsaws, workshop tools, pigs, tractors and other mobile machinery.

Firearm use without hearing protection presents an extreme risk, where instant damage is possible and longer-term damage commences from a young age.

Hearing screening programs at agricultural field days in NSW, report that around 2/3 of participating farmers have a measurable hearing loss, compared to 22-27% of the Australian population.

Around 50 - 60% of farmers report having tinnitus. Farmer's hearing loss in a South Australian study, was on average 10-15 yrs worse than international standards for persons of the same age. Whilst self-selection bias may be a factor in hearing health programs, several studies confirm higher prevalence of hearing loss amongst farmers internationally.

Good indicators for a measurable hearing loss on audiogram, include self-reported hearing difficulties and suggested hearing loss from a friend or family member. Given the high noise exposure risk of farmers, asking some simple questions about noise and hearing problems, can help with decisions about referral for hearing assessment.

### Questions to ask farmers about noise and hearing loss

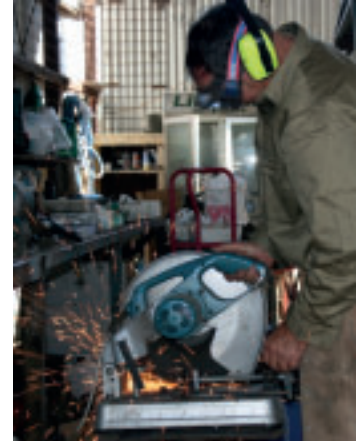
- Have family or friends ever suggested to you, that you may have a hearing loss?
- Do you have difficulty hearing when using the telephone, watching TV or hearing conversation where there is background noise?
- Do you experience tinnitus (ringing or noises in the head or ears)?
- Are you regularly exposed to noise from tractors, chainsaws, workshop tools or firearms?

### Hearing screening and services

Local Community Health Centres or the *Yellow Pages*\* can provide information about the availability of hearing services in your area. *Australian Hearing* also offers a free telephone hearing screening service through **Telscreen 1800 826 500 (Freecall)**. The *National Relay Service* [www.relayservice.com.au](http://www.relayservice.com.au) provides telephone access services for the hearing impaired.

### ON-FARM PREVENTION

A take-home checklist is available to help farmers assess and control their risk of farm noise injury. Suggested actions include using or designing quieter alternatives where possible (eg. cabined machinery, insulated walls), regular machinery maintenance, rotating tasks and using earmuffs or earplugs in any area where one's voice needs to be raised to be heard at distance of one metre.



*As a matter of priority, hearing protection should always be worn when using firearms.*

22 Franklin R, Challinor K, Depczynski J & Fragar L. *Noise exposure, Hearing protection and noise injury in young adult farmers*. ACAHS & RIRDC. Moree 2000

23 Farmsafe Australia. *Noise injury prevention strategy for the Australian farming community*. ACAHS & FSA Moree 2002

24 Williams W & Purdy S. *The reliability of self-reported hearing loss from occupational noise exposure* JOHS-ANZ 2008,24(2):143-153

25 Choi S, Pee-Asa C, Zwerling C, Sprince N, Rautiainen R, Whitten P, Flamme G. *A comparison of self reported hearing and pure tone threshold average in the Iowa Farm Health and Hazard Survey*. Journal of Agromedicine 2005, 10(3):31-40

# HEALTH AND SAFETY OF OLDER FARMERS

## FARMERS WORKING LONGER<sup>8 26 27</sup>

The average age of Australian farmers was reported as 51 years in 2001 and is increasing. The proportion of farmers and farm managers over 55 years rose from 38% in 2001 to 43% in 2006. Farmers over 55 years have double the risk of farm injury of younger farmers. Older farmers are at increased risk of ill-health and injury due to the natural effects of growing older, such as loss of muscle strength and agility; slower reaction times; diminished eyesight; impaired balance and reduced concentration. This is exacerbated by the nature of farm work, which is physically demanding; involves working with a variety of hazards; and often necessitates working long hours and in isolation. Geographic and socio-economic factors can also affect health access and equity for both older and younger farmers.



## INJURY<sup>1 4 5 6 26</sup>

Around 40% of all on-farm injury deaths are of persons aged 55 years and over. Tractors, quad bikes and farm vehicles the most common causes of fatal injury to older farmers.

Around 30% of adult hospital admissions of farmers for injury are 55 years and over. Most are male (80%). The most common causes are falls, cattle handling and farm motorbikes. Falls injury is commonly related to slips, trips or stumbling on ground surfaces. The risk of fracture from a fall increases with age.

Noise injury has been shown to affect around two-thirds of Australian farmers, with around one half reporting tinnitus. Hearing loss in older farmers is often due to many years of exposure to noise from firearms, tractors, chainsaws and other farm machinery.

Another real concern with older farmers, is the high suicide risk. Suicide in older farmers and farm managers over 65 years, is around twice that of other, older Australians.

## WHAT OLDER FARMERS SAY<sup>27</sup>

Older farmers have identified that the main challenges to work on farms are caused by:

1. Loss of stamina and getting easily fatigued
2. Slower recovery time after working
3. Painful, stiff and inflexible joints
4. Loss of strength
5. Not being able to hear as well
6. Trouble with eyesight
7. Poor memory
8. Slower reflexes
9. Feeling less stable on your feet

Older farmers typically report difficulty with:

1. Driving
2. Carrying and lifting
3. Getting around
4. Getting the work done in a day
5. Everyday communication
6. Work in the workshop
7. Fencing
8. Tractor and machinery operation
9. Using chemicals
10. Working alone
11. Working with stock - cattle and sheep

<sup>26</sup> Morton C, Fragar LJ, and Pollock K. *Health & Safety of Older Farmers in Australia*. The Facts ACAHS & RIRDC 2006

<sup>27</sup> Australian Bureau of Statistics <https://www.censusdata.abs.gov.au/CDATAOnline> accessed 8/1/2009

<sup>28</sup> Fragar L, Payne D, Henderson A and Wakeford P *The Great idea Bank. Making farmwork easier as we get older* ACAHS Moree 2007



# HEALTH AND SAFETY OF OLDER FARMERS

The *Older Farmers Program* of Farmsafe Australia, promotes the following actions for making farm work easier as farmers grow older:

## 1. TO MAKE PEOPLE FIT FOR FARM WORK

Farmsafe programs encourage older farmers to:

- Have regular health checkups with their GP
- Have vision and hearing tested
- Talk with their GP about any mental health concerns
- Discuss their falls risk with their GP



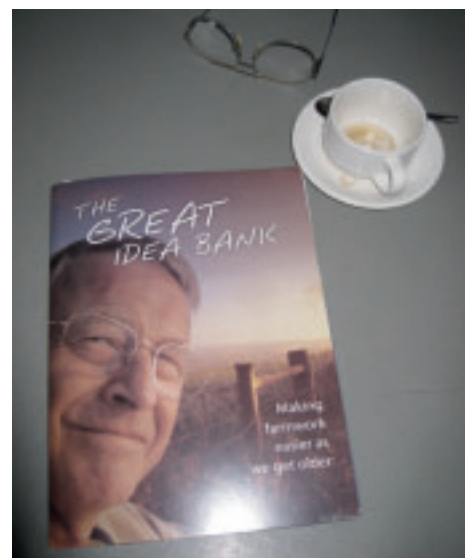
The resource *Preventing Falls for Older Farmers* can be obtained through state farmsafe organisations or downloaded from [www.aghealth.org.au](http://www.aghealth.org.au). A reference copy is included at the back of this Kit. The resource encourages farmers to talk with their GP about their falls risk and ways to reduce falls – through exercise and by modifying the farm environment.

## 2. TO MAKE FARMS FIT FOR OLDER FARMERS

Given the common injuries and reported difficulties of older farmers, Farmsafe Australia encourages older farmers to regularly assess farm hazards; and ways they can reduce injury risk through simple changes to the farm environment or to farming systems.

Measures may include a combination of:

- eliminating hazards where possible (eg. cull aggressive stock, remove clutter)
- substitution for a lesser hazard (eg. use a small utility vehicle instead of a quad bike)
- engineering or design intervention (eg. hydraulics for lifting, good stockyard design, mobile stands for workshop machines, steps and rails for climbing machinery, providing good lighting around house yard and in workshops)
- safe work practices (eg. ring home base regularly if working alone)
- use of personal protective equipment (eg. hat, helmets, gloves, boots etc.)



**For more information on resources and programs for older farmers, go to [www.aghealth.org.au](http://www.aghealth.org.au)**

# REHABILITATION AND RETURN TO WORK OF INJURED FARMERS



**F**armers seriously injured during the course of their work, often report having trouble finding the assistance they need to return to productive work.

*AgrAbility Australia* is a network of injured and disabled farmers offering informal, peer support and information to others who have suffered a severe injury or disabling illness. The network shares ideas and solutions to assist farmer members to be productive in their farm endeavours. Membership is free and open to farmers with a disability or illness as well as their carers and family. The network provides:

- A forum for farmers to get in touch and share ideas, with other farmers with similar disabilities who have successfully returned to farm work.
- A means of communication with various professionals and technicians, that they may otherwise have difficulty accessing.
- Access to the *AgrAbility Australia Resource Centre*, for information on assistive technology. This enables farmers to fabricate / modify machinery and work environments, to better suit their particular needs.
- *AgrAbility Information Sheets* which detail modifications farmers in the *AgrAbility Australia* network have made to make farming easier. The *Information Sheets* and other resources are available at [www.aghealth.org.au](http://www.aghealth.org.au) > **Projects** > **Health Projects** > **Farmers with Disabilities**

## REHABILITATION SERVICE PROVIDERS

While the national accident and injury rate for the agricultural industries is high, farmers and farm workers represent a relatively small percentage of the overall client base for most rehabilitation service providers. Despite these statistics an informal survey of rehabilitation service providers found that over half the respondents wanted additional information and training in farmer rehabilitation.

## RESOURCES AND FURTHER INFORMATION

A series of resources have been developed to meet the needs of rehabilitation service providers and General Practitioners providing referral advice. These can be found at [www.aghealth.org.au](http://www.aghealth.org.au) > **Projects** > **Health Projects** > **Farmers with Disabilities**

- Identifying, selecting and implementing assistive technology in the agricultural workplace (manual)
- Conducting agricultural worksite assessments (manual)
- Osteoarthritis in farming people - a practical resource (manual)
- Farming with Back Pain (pamphlet)
- The Gate Latches Booklet - 10 easy-to-use gate latches for on the farm (booklet)
- The Ultimate Shearers Handbook ([www.ultimateshearers.com](http://www.ultimateshearers.com))

# SECTION TWO

## FARM HEALTH AND INJURY PREVENTION RESOURCES

### TAKE HOME CHECKLISTS – FOR FARMERS

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### CLINIC POSTERS – FOR RURAL GENERAL PRACTICES

# FARM WORKSHOP SAFETY

**S**erious injury and death from electrocution, crush injury, fire and explosion is occurring in farm workshops. Twenty percent (20%) of farm injury presenting to hospital Emergency Departments is caused by farm maintenance work. More than 30% of these are eye and hand injuries. Whilst these injuries are generally not life threatening, they result in significant downtime, workers compensation claims and reduced farm productivity. The following checklist can be used to help you identify and manage some workshop hazards and safety risks on your farm.

## GUARDING

Replacing and maintaining guards on workshop equipment, particularly bench grinders, is one way that farmers can reduce the risk of eye and hand injury to people working in farm workshops.



- Replace bench grinder guards and broken/ pitted spark deflector shields
- Check and replace all power tool guards. Keep them well maintained
- Guard the air compressor belts and pulleys
- Wear eye protection when grinding and using cutting power tools

## SAFEGUARDING ELECTRICAL EQUIPMENT

Workshop electrocution is caused by faulty wiring, electrical installation, damaged power leads and water in the workshop.



- Fit a Residual Current Device (RCD) to the electrical circuit board to prevent electrocution
- Routinely test the RCD to check that it is working
- If no RCD is fitted to the electrical circuit board, use a portable RCD
- Check and test all electrical cords and extension leads regularly for wear and damage
- Use a licensed electrician to carry out all electrical work



# FARM WORKSHOP SAFETY

## MAINTENANCE

Workers and visitors to the workshop are at risk of slip and trip injury if access to the workplace is cluttered. Serious injury and death can be caused being crushed under farm machinery and vehicles during service and maintenance.

- Clean and tidy the workshop. Keep floors free of slip/ trip hazards including oil, tools, extension cords and rubbish
- Support vehicles and machinery with stands before working under jacked vehicles, utes, tractors and machinery
- Inflate split rim tyres in a safety cage
- Store fuel, oil and flammable material away/ outside the workshop from welding and grinding to prevent fire and explosion



## PERSONAL PROTECTIVE EQUIPMENT

There is a wide variety of Personal Protective Equipment (PPE) currently on the market to help protect against hazards in the workshop.

- Make sure personal protective equipment (PPE) is available for all work including eye goggles, welding helmet, hearing protection, gloves and work boots
- Wear hearing protection where there is loud noise
- Train and instruct all farm workers to use, store and maintain PPE
- Have a First Aid Kit in the workshop



Farm safety checklists and other information on farm safety risks and controls, can be downloaded from the Farmsafe Australia website at [www.farmsafe.org.au](http://www.farmsafe.org.au).

*Australian Centre for Agricultural Health and Safety*

PO Box 256 Moree NSW 2400

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# TRACTOR SAFETY

**B**etween 2001 - 2004, 35% of traumatic deaths on Australian farms were associated with plant and equipment. Two-thirds of these were tractor related. Tractor deaths and injury occurs from tractor runovers, rollovers and entanglement in power take-off shafts (PTOs). Design features for tractors, such as rollbars, neutral start switches and safe operator access have improved the situation, but injury events continue to occur.

## TRACTOR ROLLOVER

Tractor rollover deaths have declined in the past decade, with more widespread retro-fitting of rollbars (ROPS) to second-hand tractors. However, not every tractor has a roll-bar and rollover deaths still account for around 30% of all tractor deaths.



- Fit a Roll Over Protection Structure (R.O.P.S.) to all tractors to help prevent injury to the operator in the event of a tractor roll-over**
- Where tractors are fitted with front end loaders, fitting a falling object protective structure will prevent injury to the operator from falling loads, such as round hay bales
- Do not allow passengers to ride on tractors
- Do not overload tractors. Check tractor User Manuals for correct tractor ballast

## TRACTOR RUNOVER

Tractor runovers are the leading cause of tractor-related deaths, responsible for around 40% of fatal tractor injuries. Older farmers are at greater risk of tractor runover. Incidents are often associated with maintenance, jump-starting, checking or operating implements and alighting moving tractors. Some runovers involve children.



- Keep tractor steps and handrails in good repair or replace old tractor steps with safer tractor access
- Fit steps which enable access outside the line of the rear wheel of the tractor.** A diagram and free guide is available at [www.farmsafe.org.au](http://www.farmsafe.org.au)
- Do not get on or off a moving tractor
- Do not jump start the tractor while standing on the ground or in front of the tyres
- Maintain the hand brake in good repair. Engage the handbrake or place the transmission in Park before getting on or off the tractor

# TRACTOR SAFETY

2.2

## TRACTOR POWER TAKE OFF SHAFTS

Tractor operators and bystanders are dying and being severely injured after being entangled in tractor and implement PTO shafts - on post hole diggers, slashers, feed mixers and chaffers.

- Fit a guard to all machinery Power Take-Off (PTO) shafts
- Regularly check and replace old or worn PTO shaft guards
- Make sure that the tractor master guard and implement guards are fitted before operating any PTO powered machinery**
- Keep all bystanders away from operating PTO powered machinery



## MAINTENANCE AND TRAINING

Poor tractor maintenance and lack of safe tractor operator training contribute to tractor accidents.

- Always keep tractor brakes, lights and electrics well maintained
- Keep the engine free of rubbish. Clean the tractor regularly, especially during slashing or harvesting, to reduce the risk of fire
- Check and replace all guards after maintenance and before operating the tractor
- Ensure all tractor operators are trained in their safe operation
- Only tow loads attached to the tractor drawbar.
- Carry a fire extinguisher and a first aid kit on each tractor



For farm safety checklists and other information on farm safety risks and controls, go to [www.farmsafe.org.au](http://www.farmsafe.org.au) or contact:

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# FARM MACHINERY SAFETY

**B**etween 2001 - 2004, around 35 % of traumatic deaths on Australian farms were associated with plant and equipment, including workshop equipment. Australia-wide, there are around 1,000 workers' compensation claims made each year for injury associated with powered machinery and equipment in the agriculture and horticulture industries. This represents 24% of all claims in these industries.

## GRAIN AUGERS

Grain augers cause many injuries, especially to arms, hands, fingers and feet being caught in unguarded, belts, pulleys and flights. Moving raised augers around overhead power lines is causing electrocution. Augers are also toppling and collapsing causing crushing injuries, because they are being moved before they are emptied and lowered.



- Guard auger hoppers and exposed flights.**  
A grain auger industry standard for the retrofitment of auger guards is available at [www.workcover.nsw.gov.au](http://www.workcover.nsw.gov.au)
- Guard all auger pulleys, drive belts and shafts
- Check for overhead power lines before raising or moving augers
- Consider placing overhead power lines around silos and grain handling areas underground
- Empty and lower augers before moving them

## POST HOLE DIGGERS



- Consider replacing older posthole diggers with a post driver
- Guard all PTO drive shafts
- Wear close-fitting clothing to avoid entanglement in the posthole auger
- Keep all bystanders away from operating posthole augers
- Do not operate posthole diggers alone**



# FARM MACHINERY SAFETY

## POWER TAKE OFF SHAFTS

Tractor operators and bystanders are dying and being severely injured after being entangled in tractor and implement PTO shafts on post hole diggers, slashers, feed mixers and chaffers.

- Fit a guard to all machinery Power Take-Off (PTO) shafts**
- Regularly check and replace old or worn PTO shaft guards
- Make sure that the tractor master guard and implement guards are fitted before operating any PTO powered machinery
- Keep all bystanders away from operating PTO powered machinery



## MOTORS, PUMPS AND MAINTENANCE

Drive shafts on pumps, motors and machinery cause many farm injuries.

- Keep operator manuals readily accessible for safe machinery operation and maintenance
- Turn off and chock all machinery and motors before performing any maintenance
- Build a guard for all exposed drive shafts
- Replace all guards after maintenance and before operating any machinery**
- Have a first aid kit and fire extinguisher close by - in the workshop or in the vehicle / tractor



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# FARM VEHICLES, 2 AND 4 WHEELED MOTORBIKES

**F**arm vehicles, including cars, utilities, trucks, aircraft, two and four wheeled motorbikes, accounted for around 35% of all injury deaths on farms from 2001-2004. A further 70-100 farmers and farm workers are killed each year from road accidents in vehicles on public roads.

## FOUR WHEELED MOTORBIKES (QUAD BIKES)

Four wheeled motorcycles, are the leading cause of on-farm vehicle-related deaths in Australia, with around 12 -15 quad bike related deaths each year. The main causes of severe injury and death are head and neck injury; as well as crush injury and asphyxia associated with quad bike rollover. Quad bikes are also the leading cause of fatal injury in children aged 5-14 years on farms. Quad bikes are sometimes used for tasks beyond their original design limits. Lack of formal training, excessive loading (eg. spray tanks), inappropriate attachments, carrying of passengers and use by children not mature enough to control the machines, increase the risk of quad bike collision and rollover. Poor use of helmets also increases the risk of head injury.

## CHOOSING THE RIGHT MACHINE FOR THE JOB

The farm ute or the newly marketed Small Utility Vehicles, have safety features that provide protection for operators in the event of roll-over or collision. These include a wider wheel-base, roll-bars (ROPS), seats for passengers, seat belts and trays for carrying loads.



- Check that the quad bike is the safest machine to do the job. If you need to carry passengers, use a ute
- Do not carry any passengers on quad bikes
- No riders under 16 years on quad bikes - either as operator or passenger**
- Set speed limits and establish 'no go' areas on the farm, such as hills and slopes, dam banks or any where the quad bike is at higher risk of roll-over
- Do not use attachments that may interfere with operator control and stability
- Do not modify quad bike wheels and maintain the tyre pressures at the level advised in the Manual
- Do not overload the quad bikes. Check the Operator's Manual before carrying or towing loads
- Check with your local dealer about operator training courses for quad bikes

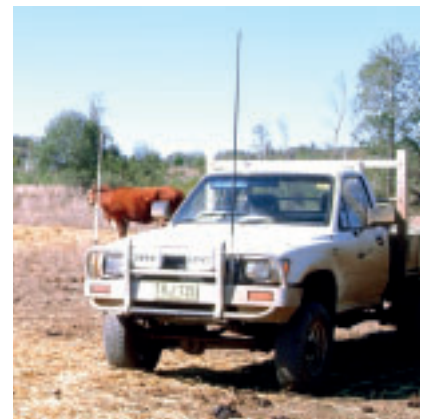
# FARM VEHICLES, 2 AND 4 WHEELED MOTORBIKES

2.4

## CARS, UTES AND TRUCKS

A number of accidents have involved vehicles colliding with an object or rolling, with unrestrained passengers being thrown from the vehicle or crushed. This is a common problem involving young people 15-24 years and includes passengers riding in the tray of utes, trucks and trailers during recreational activities such as hunting, mustering or skylarking. Young children under five years are also at risk of runover falling from utes or as pedestrians.

- Do not allow children, young people or adults to ride in the tray of utes, trailers or trucks**
- Ensure seatbelts are fitted and used in all cars, utes and trucks and that everyone is instructed to use them
- Set speed limits for all vehicles on farm and for areas near the house where children may be located. A securely fenced house yard can help prevent young children wandering into vehicle areas
- Keep all farm vehicles, motorbikes and quad bikes well maintained. Many accidents have been caused by non functioning brakes, suspension and worn tyres
- Check the tyre pressures regularly. Do not over inflate tyres. Check the Operator's Manual for proper inflation
- Have a "No drink and drive" policy that includes drugs



## SAFETY BEHAVIOURS

Vehicle safety checks, skills development and use of safety equipment needs to be second nature.

- Make sure all riders are trained to safely operate farm motorbikes and vehicles
- Conduct a safety check on all farm vehicles and motorbikes before starting work
- Always wear an approved helmet and sturdy workboots when riding farm motorbikes (including quad bikes)**
- Always wear seatbelts in vehicles on the farm and follow speed restrictions
- Make sure children are trained and supervised when riding two-wheeled motorbikes; and that these are an appropriate size. (Can they lift the bike from the ground unassisted and reach the ground with their feet when astride the bike?)



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# CHILD SAFETY ON FARMS

**A**round 20 children are fatally injured on Australian farms each year and around 500 are hospitalised for on-farm injury. For children under five years, the greatest risk is drowning in farm dams. This is followed by runovers or falls from vehicles, including quad bikes, cars and utes. Quad bikes are the leading cause of death to children 5-14 years of age; and for children who are visitors to farms. Farm motorbikes (for boys) and horse-riding (for girls), are leading causes of hospitalised injury. Children and young people continue to be seriously injured or killed on farms due to practices such as not using helmets or seatbelts; and riding in the back of utes and trailers.

## A SAFE PLACE TO PLAY

A securely fenced house yard supported by close and active supervision can help prevent toddlers and young children wandering away un-noticed, accessing farm dams, roadways and other farm hazards.



- Is there a securely fenced houseyard or play area for young children to play, separated from farm hazards?**
- Are house yard fences 1.2-1.5 m high; have less than 10cm ground clearance; and no footholes for climbing?
- Are house yard gates self-latching and child resistant?
- Does the safe play area have shade and interesting things for children to do?



## WATER

- Are swimming pools, effluent ponds, channels or dams near the house securely fenced?
- Are tanks, wells and troughs near the house fitted with lids/mesh - and are unused dips and ditches filled in?
- Have those who look after children been alerted to 'keep watch' when children are near water or can wander off into water?
- Do you know how to resuscitate a drowning child?**



## HORSES

- Are children only allowed to ride horses suited to their age and riding ability?
- Are children appropriately instructed and supervised when riding and handling horses?
- Do children always wear a well fitting equestrian helmet and smooth-soled boots when riding horses on the farm?**



# CHILD SAFETY ON FARMS

## FARM MOTORCYCLES

- Are children appropriately trained and supervised when learning to ride two-wheeled motorcycles?
- Do children ride bikes of an appropriate size? Can they lift the bike off the ground unaided; and can their feet touch the ground when astride the bike?
- Do riders always wear a correctly fitted motorcycle helmet, long pants, and sturdy footwear?**
- Does the farm adopt manufacturers' recommendations to:
  - Prevent children under 16 yrs riding quad bikes?
  - Prevent passengers riding on quad bikes?



## FARM VEHICLES AND MACHINERY

- Are drivers careful when moving vehicles near the house in case children are present?
- Are keys kept out of reach of children when vehicles are not in use?
- Do children always use seatbelts or proper restraints in vehicles; and never ride in the back of utilities?**
- Do you prevent children from riding as passengers on tractors and mobile plant?
- Are children generally encouraged to keep clear of tractors and machinery on your farm?



## OTHER HAZARDS AND 'OUT OF BOUNDS' RULES

- Are 'out-of-bounds' rules regularly reinforced with children who are not with a supervising adult?**
- Do 'out-of-bounds' areas include hazardous places such as water storages, machinery and vehicles, silos, workshops and areas where stock are yarded?
- Are hazards such as stockyards, firearms, chemicals, electricity, noise and silos that children could access on your farm, been identified and addressed?



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# FARM NOISE & HEARING LOSS

**N**oise injury affects the hearing of up to two-thirds of the farming community. Noise injury occurs when thousands of tiny hair cells in the inner ear (cochlear), are damaged through excessive noise. These hair cells are needed to receive sound vibrations before transmitting them to the brain. Once destroyed, these hair cells are not replaced. The process of hearing loss through noise injury is painless, progressive and permanent - but it is also preventable.

## SIGNS OF NOISE INJURY AND HEARING LOSS



Do you experience difficulty hearing:

- On the telephone
- Watching TV
- In meetings or during conversation at work
- When there is background noise

Do you have:

- Tinnitus (noises in the ears or head)?
- Family or friends suggest you have a hearing loss?

## HEARING SCREENING AND SERVICES

Have you had a hearing screening test? If not, contact your Community Health Centre or the Yellow Pages\* for hearing services in your area. Australian Hearing offers a free telephone hearing screening service through: Telscreen 1800 826 500 (Freecall). The National Relay Service [www.relayservice.com.au](http://www.relayservice.com.au) provides telephone access services for the hearing impaired.

## FARM NOISE EXPOSURE

The degree of noise injury will depend on the length of time exposed to noise - as well as how 'loud' the noise is, as measured in decibels (dB). For each 3 dB increase, the noise intensity is doubled. Intense noise, (eg. discharging firearm), can cause instant damage, but long periods exposed to tractors and other noise can also cause damage.



Are you (or were you) exposed to the following noise sources:

- Tractor (no cabin)
- Workshops tools
- Firearms
- Heavy machinery
- Chainsaw
- Tractor with cabin, (if it is getting older & noisier)
- Other recreational or occupational noise

**For each activity, do you ALWAYS wear hearing protection? (ear muffs or ear plugs)**

# FARM NOISE & HEARING LOSS

## FARM NOISE LEVELS, EXPOSURE AND HEARING PROTECTION

Machinery or activity	Average noise levels in dB(A) at operators' ear	Typical time period before hearing damage (No hearing protection)	Min. protection level Ear muffs or ear plugs Class / (SLC80 rating)*
Firearms	140+ (C)	No Safe Exposure	Class 5 (26dB+)
Pig handling - suckers	109	1 - 2 mins	Class 5 (26dB+)
Chainsaws	106	3 mins	Class 5 (26dB+)
Irrigation pumps	(diesel) 100	15 mins	Class 4 (22-25dB)
Circular saws	99	18 mins	Class 3 (18-21dB)
Angle grinders	98	20 mins	Class 3 (18-21dB)
Augers	93	1 hr	Class 2 (14-17dB)
Tractors without cabins	92	1.5 hrs	Class 2 (14-17dB)
Ride-on lawn mowers	92	1.5 hrs	Class 2 (14-17dB)
Shearing	86	7 hrs	Class 1 (10-13dB)

## OTHER CONSIDERATIONS

Use of radios in cabined machinery can increase noise in the cabin by up to 5dB. Whilst usually not a problem, this can be significant in older machinery, where the additional use of a radio can expose operators to average noise levels over 85dB(A). Risk of hearing damage can also be increased when working long days during peak seasons (14 hrs+).

Ear muffs or ear plugs are both suitable forms of hearing protection. However, they need to fit, be clean and seal well; Australian Standards Approved (AS) and compatible with other PPE (eg. hats, faceshields). It is also essential that they provide enough protection for the job.\*

## NOISE MANAGEMENT

Reduce farm noise and exposure where possible, FIRST, before using hearing protection.

Have you done any of the following to manage farm noise?

- Used a quieter alternative where possible (eg. cabined tractor vs. tractor with no cabin; or plastic vs metal chutes)
- Put up noise barriers or insulated walls to isolate workers from noise**
- Placed and maintained mufflers on motorised equipment
- Rearranged workshop layout to dissipate noise
- Regularly maintained equipment - engines, seals, brackets
- Limit time exposed to noise in any one day - rotate tasks
- Provided hearing protection & information on noise to workers, including safety signs for noisy areas



For farm safety checklists and other information on farm safety risks and controls, go to [www.farmsafe.org.au](http://www.farmsafe.org.au) or contact:

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# ASTHMA MANAGEMENT ON FARMS

**A**sthma is a condition of inflammation and spasm of the airways, which can be triggered by a range of factors. In particular, organic dusts such as grains and pollens, can trigger asthma in susceptible people. Farmers with a family history of asthma, can also be at greater risk. As farm families are often long distances from medical help, awareness and treatment of asthma is especially important. Acute asthma is a life threatening condition, but asthma attacks can be prevented.

## SYMPTOMS OF ASTHMA



Do you suffer from the following symptoms?

- coughing
  - tightness in the chest
  - wheezing
  - shortness of breath
  - difficulty breathing
- Do these symptoms often occur after exposure to grain or other organic farm dusts?**
- Do symptoms sometimes limit your ability to work effectively? (ie. coughing and shortness of breath with physical exertion)
- Are symptoms worse at night?

## EXPOSURE TO FARM DUSTS

Whilst farmers are not necessarily at greater risk of asthma than other people, farmers are more likely to be exposed to organic dusts in the course of farm work, which can trigger asthma episodes in susceptible persons. Farm dusts are often generated when produce or stock are moved (eg. grain, hay, cattle), or when pollens are released from pasture. They are a complex mixture of organic and inorganic particles derived from pollens, grain husks, leaves, soil, animal and insect parts.



- Are you involved with production, storage, transportation or processing of dusty farm produce
- Are symptoms of asthma (as above) more apparent:**
  - **during grain harvest or haymaking?**
  - **when certain grasses or weeds are in flower such as rye grass or turnip weed?**
- Do you find durum wheat and barley particularly irritating?

### IMPORTANT

ANYONE WITH ASTHMA WHO LIVES OR WORKS ON A FARM SHOULD SPEAK WITH THEIR DOCTOR ABOUT A PERSONAL ASTHMA MANAGEMENT PLAN

....ALSO, EMPLOYEES WITH ASTHMA NEED TO TELL THEIR EMPLOYER, SO THAT AN ON-FARM MANAGEMENT PLAN CAN BE WORKED OUT



# ASTHMA MANAGEMENT ON FARMS

2.7

## ON-FARM ASTHMA MANAGEMENT

Management of asthma includes limiting exposure to organic dusts where possible. Consider elimination and design interventions first, but a range of measures may be required.

- Have you considered changing crops if a family member is seriously affected by asthma due to that crop?
- Can you use pelleted feed rather than dusty grain, or a dust suppressant such as molasses?
- Do you have adequate ventilation in sheds where grain and hay is stored?
- Do harvesters and tractors have cabins that isolate operators from organic farm dusts?
- Are chutes, conveyor belts, grain elevators and intake pits covered to reduce dust?
- Are air conditioners, filters and seals maintained and dusty areas generally kept clean of dust?
- Can you reduce the time spent in a dusty area?
- Do operators and bystanders stand further away or upwind of grain being augered or dumped?
- Are air purifying masks or respirators provided and available to employees for dusty activities?



## WHAT TO DO IN AN EMERGENCY

Asthma attacks can develop over a few minutes or a few days. Call 000 immediately if there is:

- Increasing shortness of breath or rapid breathing, with inability to speak more than 1-2 words per breath
- Severe chest tightness
- Feeling of distress or being frightened
- Sucking in of throat and ribs or blue coloration of the lips

While waiting for the ambulance:

1. Sit the person upright and give reassurance
2. Give 4 separate puffs of a reliever (eg. ventolin), preferably with a spacer. Take 4 breaths from the spacer after each puff
3. Wait 4 minutes
4. If little improvement, repeat steps until the ambulance arrives



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# ZOONOSES

**Z**oonoses, or diseases of animal origin, affect thousands of people each year in Australia. Those at high risk include abattoir workers, veterinarians and farmers who have regular and close contact with animals. Examples include Q Fever, cryptosporidiosis and Leptospirosis. Symptoms may be mild or lead to serious illness with long term health effects.

## Q FEVER

Q fever infection is the most common zoonotic disease in Australia. The bacteria responsible (*Coxiella Burnetti*) can survive for long periods in animal environments. People are generally infected by inhaling air or particles contaminated with the excreta or birth fluids of infected animals. Cattle, sheep, goats, domestic pets, rodents and kangaroos are known carriers of the disease. Whilst some cases are limited to mild, flu-like symptoms, others progress to affect the heart, lungs or liver. Chronic fatigue can also develop, with disabling consequences.

## LEPTOSPIROSIS

Leptospirosis is also a flu-like illness, which, along with other farmers, commonly occurs in dairy workers, banana and sugarcane growers. Humans contract the disease when skin and mucous membranes are exposed to the infected urine of cattle, rats, pigs and dogs. Again symptoms range from mild to severe, with some effected persons developing abnormal liver and kidney function.

If you regularly handle cattle, sheep, goats or feral animals, see your doctor if you develop the following flu-like symptoms. Your doctor may arrange testing for Q fever and Leptospirosis.



Symptoms of Q Fever or leptospirosis include:

- fever or chills
- headache
- profuse sweating
- weakness or malaise
- nausea
- muscle and joint pain
- rash
- jaundice
- severe coughing or breathing problems

## MEDICAL TREATMENT AND PREVENTION

Antibiotics are usually prescribed for Q fever and leptospirosis, to prevent the more disabling consequences of these illnesses. A vaccine is available for Q Fever (QVax) but it does require a sensitivity test before administration.

ASK YOUR DOCTOR ABOUT Q FEVER VACCINATION

# ZOONOSES

## Other zoonotic diseases:

### CRYPTOSPORIDIOSIS

Cryptosporidiosis is caused by a parasite that is more common in warmer months and in wet conditions (eg. watercourses, dams, troughs). It is passed onto humans through drinking water contaminated with animal faeces; and through handling of infected animals - such as scouring calves.

Symptoms include watery diarrhoea, cramps, fever, nausea and vomiting which can last up to two weeks. If kept well hydrated, the illness usually resolves itself, but can result in considerable discomfort and downtime. It is easily spread through close contact with other workers, families, schools, daycare centres and public swimming pools. Affected persons should avoid public contact and not handle food until 1-2 days after diarrhoea subsides.

### HYDATID DISEASE

Hydatid disease is caused by the tapeworm *Echinococcus granulosus*. Its primary hosts are dogs and foxes, that eat offal containing hydatid cysts. Eggs are shed in dog faeces and eaten by grazing livestock and kangaroos. Humans ingest eggs through handling these animals. Eggs travel through the gut wall into the bloodstream to organs such as the liver, lungs and brain, disrupting organ function sometimes years later. Surgery is required to remove cysts.

### ON FARM PREVENTION

Reducing the risk of contracting a zoonotic illness, needs to include a range of measures - starting with elimination of the risk where possible. Consider these on-farm prevention measures:

- Elimination through vaccination programs in:
  - Animals eg. brucellosis in cattle, de-worming dogs
  - Humans eg. Q fever vaccination
- Separation or isolation of workers from physical contact with animal body fluids:
  - Use of machinery (preferably cabined) to clear manure and feed waste build-up in sheds, yards and lane areas where animals are regularly kept or moved
  - Limit unnecessary physical contacts with animals (eg. mechanised crushes, good yard design, no children or bystanders in yards)
- Use of personal protective equipment (PPE) - gloves, masks, waterproof boots, overalls
- Attention to thorough hand washing after handling animals and before handling food - including provision of hand washing facilities for all workers



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**A SAFETY MESSAGE FROM YOUR GENERAL PRACTITIONER...**



# FARMERS: PREVENTING INJURY

Too many farmers and their families are seriously affected by vehicle accidents and on-farm injury.

It is important to:

- Have all tractor, machinery and PTO guards in place and in good order
- Always wear seatbelts in vehicles & helmets riding motorbikes – both on and off the farm.
- Try safer alternatives to the quad bike. Utes or small utility vehicles are better designed to carry loads and passengers safely.
- Use appropriate personal protective equipment (PPE) with firearms, chainsaws, chemicals and workshop tools (eg. earmuffs, safety glasses, gloves).
- Provide a securely fenced house yard for young children to play, to prevent them wandering behind vehicles and drowning in farm dams.
- Discuss what else you can do to prevent serious injury with your GP.

For comprehensive on-farm safety management tools and resources go to:

**[www.farmsafe.org.au](http://www.farmsafe.org.au)**

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THIS RESOURCE IS ALSO INCLUDED IN YOUR GP TOOLKIT AS A LOOSELEAF A3 POSTER



# A HEALTH MESSAGE FROM YOUR GENERAL PRACTITIONER...

## FARMERS: CHECKING YOUR HEALTH

The health of many farmers is not as good as it could be.

So, it is important to:

- Have regular health check-ups for your general health
- Ask your GP about:
  - a) skin, prostate and other cancers
  - b) where to have your hearing and vision tested
  - c) your falls risk and ways to prevent falls
- And tell your GP if you are overly stressed, depressed, not sleeping, or “just not right.”

For immediate mental health help call:  
Lifeline (National) Ph. 13 11 14 or your Local Mental Health Service

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