

# Personal safety when handling livestock – risks, trends and solutions

Brian Cumming



# Man injured in Marshall Mount bull attack

By Kate McIlwain

Feb. 27, 2016, 1 p.m.



A man has been airlifted to Liverpool Hospital after he was attacked by a bull at a Marshall Mount property on Saturday.

The 71-year-old man was reportedly walked over by the bull just before noon, with paramedics reporting he has pelvic injuries and hip pain.

They said he was attacked twice by the animal, and in the second attack was knocked under an electric fence and away from the large bu

At about 12.50pm the rescue helicopter landed at the rural paddock property, which is located off Marshall Mount Road near the TAFE



# Man seriously injured after cow rams him into tree

PHILLIPA YALDEN

Last updated 07:18, February 23 2016



Trustpower TECT Rescue Helicopter

Tauranga-based Trustpower TECT Rescue helicopter picked up a 52-year-old man and flew him to Tauranga Hospital after a cow attack.

A protective mother cow has repeatedly rammed a man who was trying to tend to her calf.

The 52 year old was flown to hospital with severe internal injuries after the incident on a Bay of Plenty property on Monday night.

# Statistics – death and injury

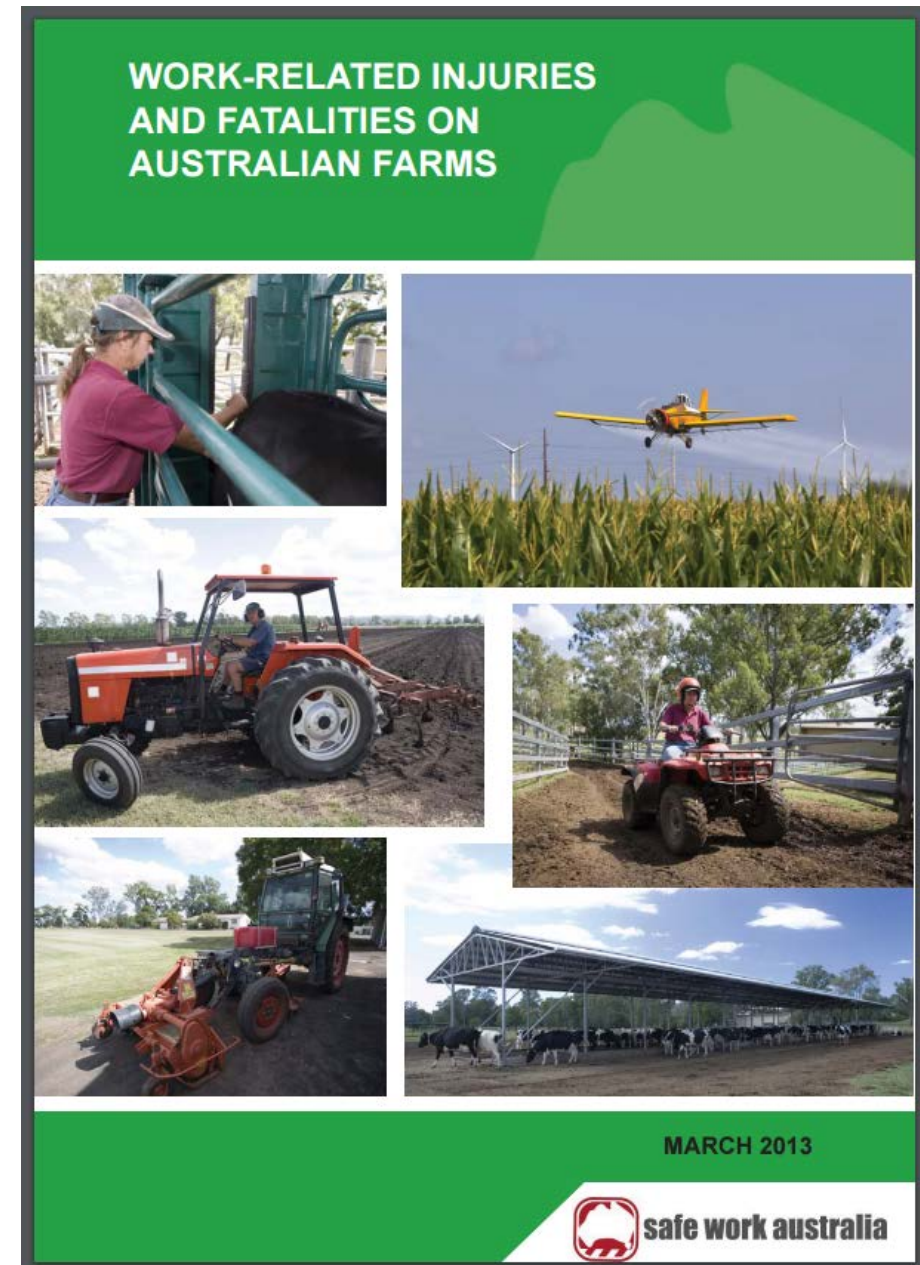


# Safe Work Australia

Farming is 'one of the most dangerous industries in which to work:

Farm workers often work alone.

Farm workers are often at a distance from help or first aid. If a farmer is injured or trapped there are often no workmates to assist and to get medical help.'



# Work related fatalities – farm

**July 2003 to June 2011**, 356 workers died while working on a farming property. This is 17% of all worker fatalities.

Incidents involving vehicles accounted for 71% of fatalities

- tractors 93 (26%)

- aircraft 48 (13%)

- light vehicles 28 (8%)

- quad bikes 27 (8%)

Incidents that did not involve a vehicle

- being hit or bitten by an animal (18)

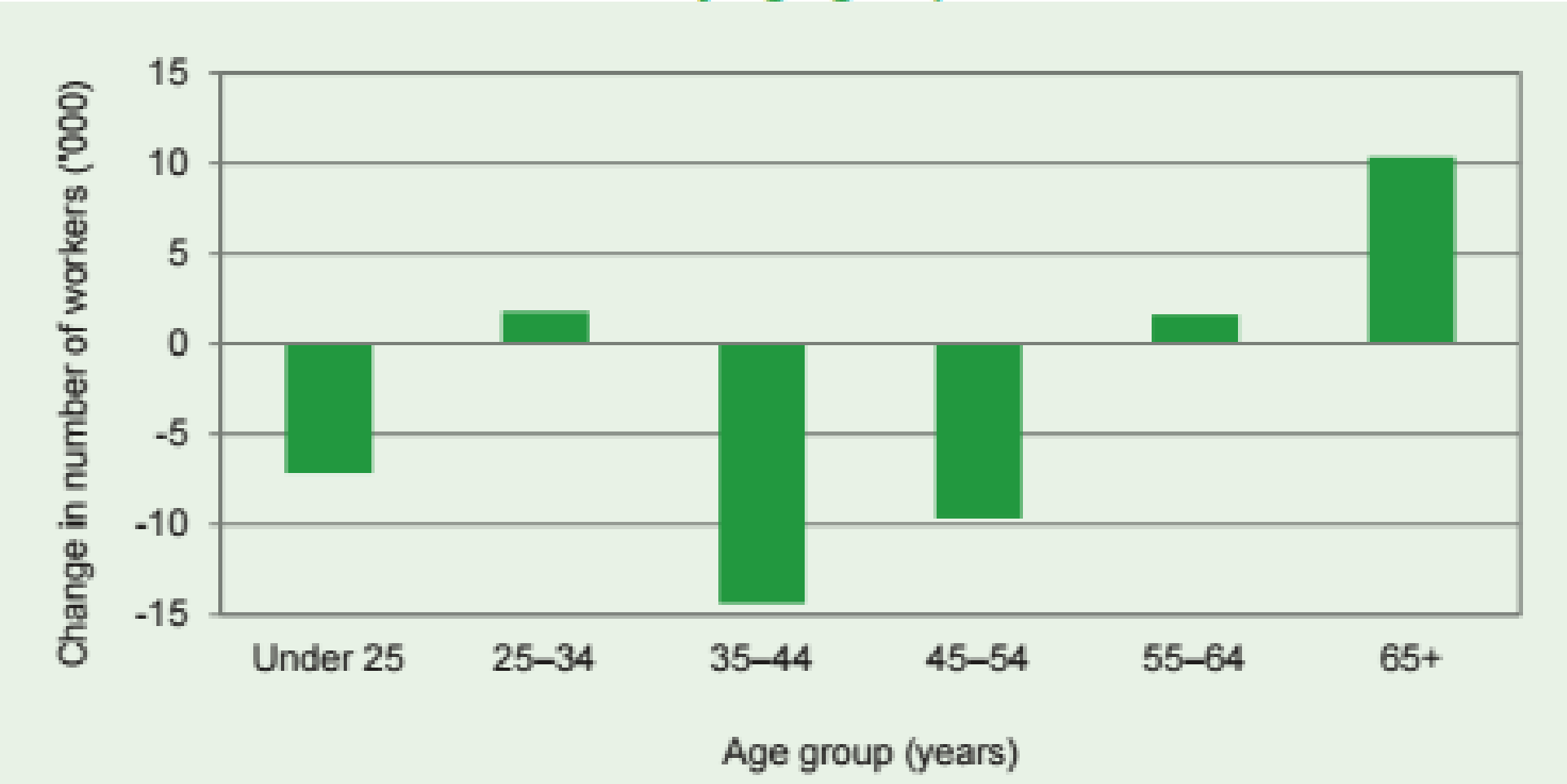
- falling from a horse (11)

- shootings while attempting to remove vermin or destroying farm animals (9)

Nearly one-third of the worker fatalities on farms were workers aged 65 years or over.

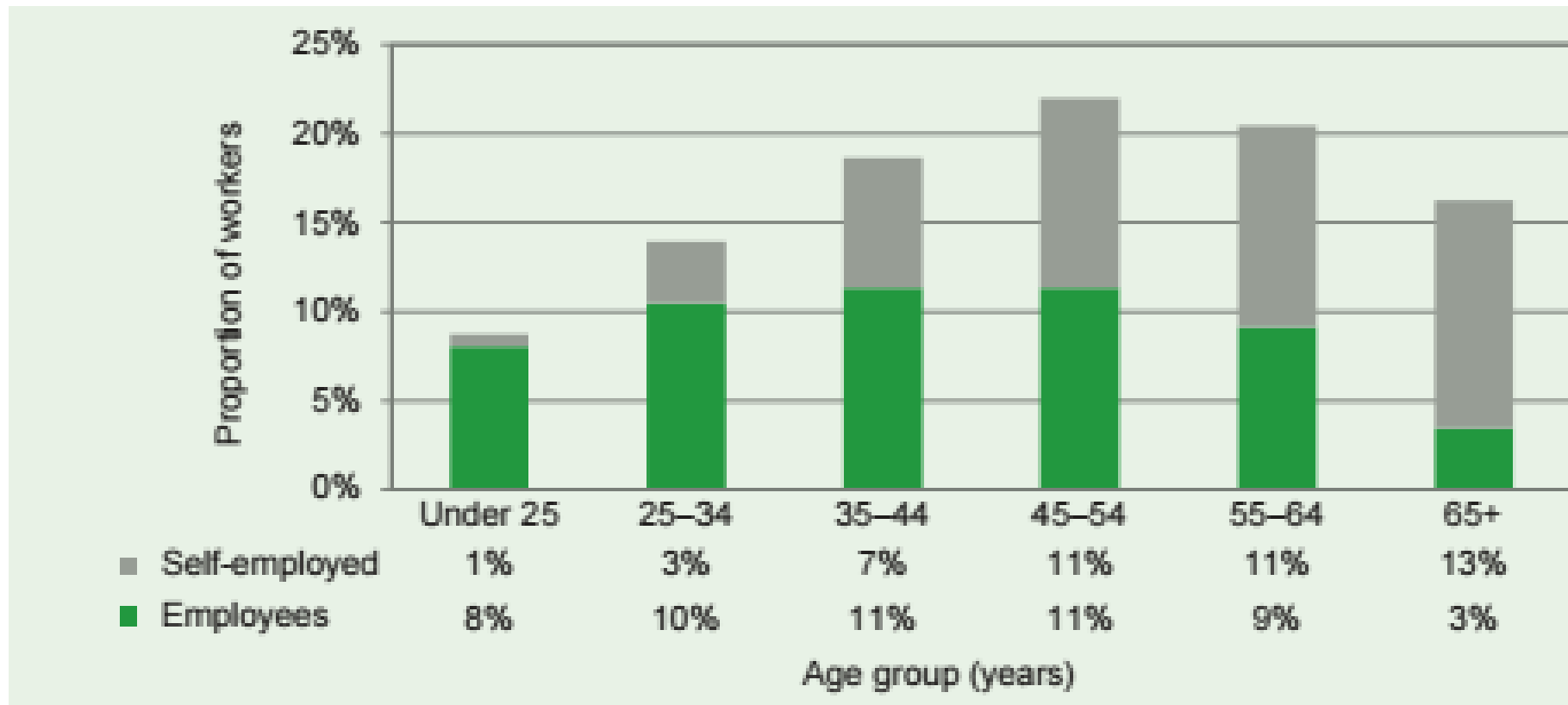


# 2004 to 2011 – increasing number of older farmers



<http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/759/Work-related-injuries-fatalities-farms.pdf>

...but older farmers are not the largest age bracket (2010 – 2011)

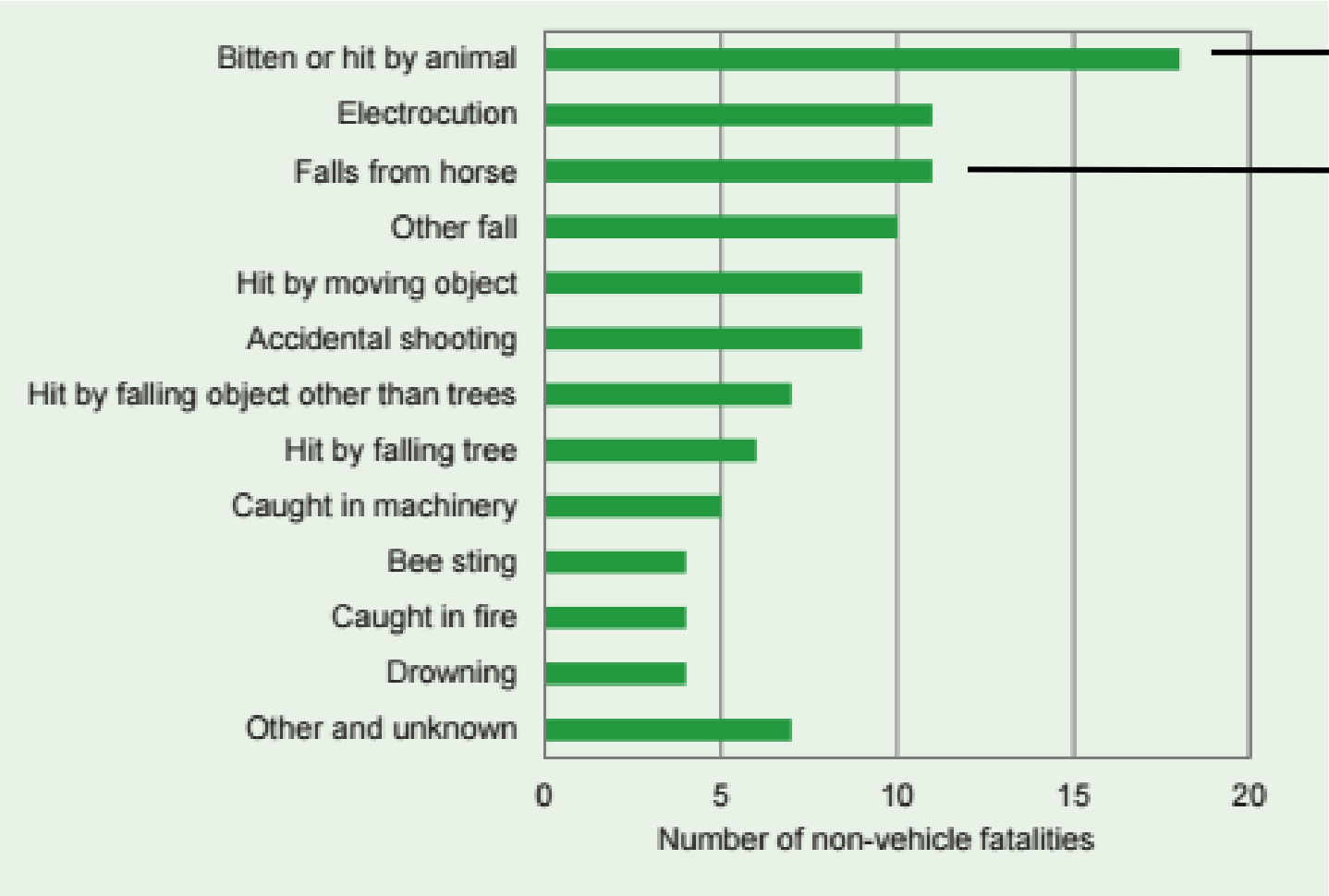


<http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/759/Work-related-injuries-fatalities-farms.pdf>



# Fatalities not involving vehicles (105 deaths)

Figure 15 Worker fatalities not involving vehicles on farms: Number by how incident occurred, 2003–04 to 2010–11 combined (8 years)



Total number	Average number per year
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18 (11 cattle)	2.3
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11 (5 mustering)	1.4
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# Have fatality numbers changed over time?

**Table 3: Worker fatalities: Number by location (farm or non-farm), 2003–04 to 2010–11**

	Number of work-related fatalities								TOTAL
	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09	2009–10	2010–11	
<b>Farm</b>	<b>60</b>	<b>46</b>	<b>46</b>	<b>31</b>	<b>47</b>	<b>38</b>	<b>37</b>	<b>51</b>	<b>356</b>
<i>Agriculture</i>	54	35	36	25	39	27	31	42	289
<i>Agriculture &amp; fishing support services</i>	4	4	5	2	3	7	5	6	36
<i>Other industries</i>	2	7	5	4	5	4	1	3	31
<b>Non-farm</b>	<b>210</b>	<b>208</b>	<b>244</b>	<b>269</b>	<b>245</b>	<b>251</b>	<b>183</b>	<b>169</b>	<b>1 779</b>
<i>Agriculture</i>	9	8	8	9	4	12	5	6	61
<i>Agriculture &amp; fishing support services</i>	1	3	2	4	1	5	0	1	17
<i>Other industries</i>	200	197	234	256	240	234	178	162	1 701
<b>Total fatalities</b>	<b>270</b>	<b>254</b>	<b>290</b>	<b>300</b>	<b>292</b>	<b>289</b>	<b>220</b>	<b>220</b>	<b>2 135</b>



<http://www.safeworkaustralia.gov.au/sites/SWA/about/Publications/Documents/759/Work-related-injuries-fatalities-farms.pdf>



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### AUSTRALIAN CENTRE FOR AGRICULTURAL HEALTH & SAFETY

The aim of the Centre is to assist rural Australians to attain improved levels of health and well-being by action to reduce the incidence and severity of injury and illness associated with life and work in agriculture.

The Australian Centre for Agricultural Health and Safety is a research centre within the Department of Public Health and Community Medicine at Sydney Medical School, University of Sydney and is situated in Moree, NSW.

The Centre's position within the University Department of Public Health and Community Medicine, with affiliations with the Faculty of Agriculture, enhances its unique position and ensures that its programs of research are collaborative, credible, firmly based in the discipline of public health and agricultural science, and assured of a strong future.

### Contact details

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[Associate Professor Tony Lower](#)

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# 2014 and 2015 (fatalities)

Livestock  
compared to quad  
bikes

**Table 1:** Agents of injury causing on-farm death as reported in Australian print media by age, 2014 and 2015.

Category	Agent	2014			2015		
		<15yrs	>15yrs	Total	<15yrs	>15yrs	Total
Animal	Cattle					1	1
	Horse		1	1		1	1
Electricity	Powerlines		1	1			
Farm Structure	Dam	2		2	1		1
	Roof/Shed door/Water tank		2	2		2	2
	Cattle dip (drowned)	1		1			
	Well					1	1
	Silo		1	1			
Farm Vehicle	Aircraft		1	1		4	4
	Helicopter		2	2		3	3
	Motorcycle		2	2		3	3
	Quad	3	9	12	2	13	15
	Side By Side Vehicle		1	1		1	1
	Truck/4WD		3	3		2	2
	Trailer					3	3
	Utility		5	5		2	2
	Materials Other NEC*/Unknown		2	2		1	1
	Tractor		10	10	1	12	13
	Earth Moving Equipment		1	1			
Mobile Farm Machinery/Plant	Forklift	1	1	2	1	2	3
	Mobile Farm Machinery/Plant NEC*		4	4	1	6	7
	Firearm						
	Trees being felled		1	1		4	4
Other	Fire					1	1
	Lightning					1	1
TOTAL		7	47	54	6	63	69

2 Year period  
3

27

2003 – 2011 27 deaths

[http://aghealth.org.au/tinymce\\_fm/uploaded/Research%20Reports/farm\\_related\\_injuries\\_report\\_2015.pdf](http://aghealth.org.au/tinymce_fm/uploaded/Research%20Reports/farm_related_injuries_report_2015.pdf)



# Work related injuries – farm

2009–10 (Agricultural workers): 17,400 had incurred a work-related injury or illness in the previous 12 months (ie 56.4 injuries per 1000 workers).

- body stress due to handling or lifting objects (25%)

- being hit by an animal (9%)

- being hit by a moving object other than an animal (18%)

- falls (21%)

Workers aged less than 25 years, recorded the highest rate of compensated injury (52 claims per 1000 employees).



2015

Livestock  
compared to quad  
bikes

**Table 2:** Agents of on-farm non-fatal injury as reported in Australian print media (Jan 1-Dec 31, 2015).

Category	Agent	2015		
		<15yrs	>15yrs	Total
Animal	Horse		5	5
	Cattle		7	7
Electricity	Powerlines			
Farm Chemicals	Fuel			
	Pesticides			
Farm Vehicle	Farm Vehicle NEC*		1	1
	Helicopter			
	Motorcycle	1	5	6
	Quad	5	36	41
	Side By Side Vehicle		1	1
	Truck			
	Utility	2		2
Mobile Farm Machinery/Plant	Mobile Farm Machinery/Plant NEC*	1	9	10
	Tractor		8	8
	Hay baler		1	1
Materials Other	Materials Other NEC		2	2
Other	Harvest machinery		1	1
	Firearm		2	2
	Lightning		1	1
	Snake		2	2
	Bee		1	1
Environment	Trees being felled		1	1
TOTAL		9	83	92

12

41

[http://aghealth.org.au/tinymce\\_fm/uploaded/Research%20Reports/farm\\_related\\_injuries\\_\\_report\\_2015.pdf](http://aghealth.org.au/tinymce_fm/uploaded/Research%20Reports/farm_related_injuries__report_2015.pdf)



May 2015 Albury



May 2015 Albury



What are the risks with working livestock?



# Risks

## Physical injury

Animal attack – bulls, cows with brand new calves, rams

Hit by animal – cattle and sheep trying to escape, or wanting to fight each other

Crushing injury – cattle yard rails, gates

Lifting – lifting sheep over rails, lifting calves

Mustering injury (motorcycle and horse)

Trips and falls – handling yard surfaces





# Why do bulls attack men?

Handler did not demonstrate dominance over the bull

Insufficient social contact

High libido bulls

77% of bulls that attacked will do so again

3 year and 7 – 10 year olds most aggressive



# Risks

Zoonoses – diseases that pass from animals to humans

Q fever

leptospirosis

anthrax



# Other zoonoses

## Bacterial:

Salmonella  
Psittacosis

## Viral:

Australian Bat Lyssavirus  
Hendra virus

## Fungi:

Ringworm

## Parasites:

Hydatids

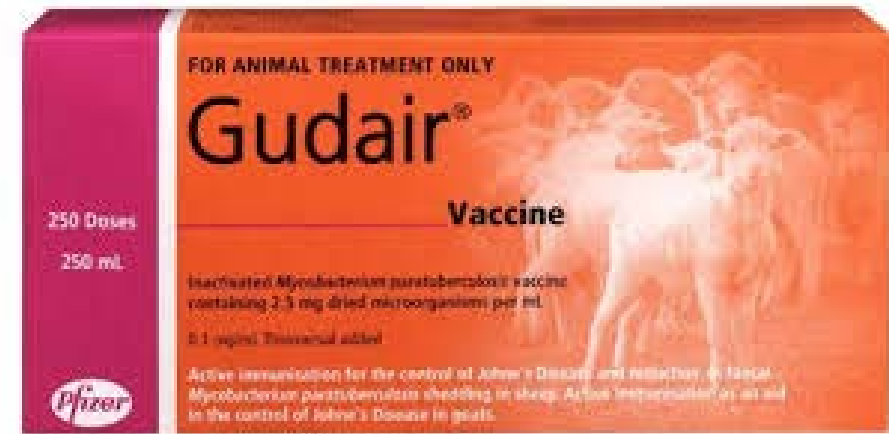


# Risks

## Needle stick injury

### ‘Gudair’ vaccine (Ovine Johne’s Disease)

‘In humans, accidental self-injection with Gudair® vaccine may result in a severe, intense and persistent granulomatous reaction at the site of the injury.’ (Zoetis.com.au)



[www.wool.com](http://www.wool.com)

### Anthrax spore vaccine

‘Accidental self injection with anthrax vaccine can cause an inflammatory reaction and medical advice should be sought immediately.’ (NSW DPI)



Both vaccines should be used with caution to avoid accidental self-injection’

[www.colorado-serum.com/pdf/csc/anthrax.pdf](http://www.colorado-serum.com/pdf/csc/anthrax.pdf)



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# Quad bikes

‘69 people lost their lives on farms last year, up from 54 in 2014.

Quad bikes and tractors accounted for 40 per cent of those deaths, with 9 per cent being children’.

Quad bike deaths:

2015 – 15

2014 – 12

Australian Centre for Agricultural  
Health and Safety



<http://www.abc.net.au/news/2016-01-13/quad-bikes-top-list-again-for-australian-farm-deaths/7086368>



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# Quad bikes

2 Coronial inquests (2015) – suggestions:

ban riders under 16 years  
mandatory licencing  
roll bars  
vehicle safety rating system  
specialised training



<http://www.quadsafeaustralia.com/>

	YES	
Quadsafe Australia:	helmets, training	

AgForce Queensland:	safety rating system	
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	NO	
	ban children	
	ban children, mandatory licencing	

Australian Centre for Agricultural Health and Safety – ‘no evidence training would reduce accidents / death’.



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# Solutions!



# Understanding the risks





Department of  
Primary Industries

**Biosecurity Operations Branch**  
Locked Bag 21, Orange NSW 2800  
Tel: (02) 6391 3771 Fax: (02) 6391 3740  
Email: [emergency.preparedness@dpi.nsw.gov.au](mailto:emergency.preparedness@dpi.nsw.gov.au)

Job Task: <b>Handling of animals</b>	Branch - Biosecurity Operations, Biosecurity NSW
	Unit - Emergency Management Unit
	Location – Temporary (field) work sites; evacuation centres; treatment & rehabilitation facilities

### RISK IDENTIFICATION AND CONTROLS

Please include all discrete steps involved in the performance of the task

**NOTE: The PPE required must be listed and the minimum PPE for each chemical must be listed as per the relevant MSDS.**

		R1 Risk without controls		R2 Risk with controls	
Procedural step(s)	Possible hazard(s)	R1	Safety control(s)	R2	
Assess the site for safety issues	Manual handling <ul style="list-style-type: none"><li>• Strains &amp; sprains</li><li>• Slips/Trips/Falls</li></ul> Equipment impact injuries – crush injuriesOil/chemical spill – hazardous chemicalHypothermiaSunburnWave impact / tidal movementDrowningSurface type eg rock platforms, muddy ground, oil spillIsolation / remotenessAnimal hazards <ul style="list-style-type: none"><li>• Bites, cuts, abrasions &amp; scratches</li><li>• Tail strike, kicking</li><li>• Crushed, trodden on, collisions</li></ul> Disease vectors – known & unknownInsect bites	S	<ul style="list-style-type: none"><li>• Determine safe approach to the animal and take care to avoid obstacles/oil</li><li>• Plan for crews undertaking rescue in advance and task personnel involved in the handling of animals. Identify potential hazards and take steps to minimise injury.</li><li>• Ensure personnel are appropriately qualified, experienced or licensed to handle and/or transport animals</li><li>• Ensure personnel have appropriate PPE for hazard (eg refer to oil MSDS) and environment eg life jackets, reflective clothing, water proof clothing, hats, non-slip footwear, eye protection, gloves etc</li><li>• Provide appropriate equipment and vehicles including lifting equipment.</li><li>• Ensure personnel have appropriate and tested communication devices prior to departure to site</li><li>• Medi-vac plan including access to First Aid Officer and kits</li><li>• Provision of areas/facilities for meal/fluid breaks where appropriate</li><li>• No person is permitted to enter oily water or access muddy ground or non-solid surfaces to rescue animals unless a risk assessment</li></ul>	L	

# Risk matrix

		Consequence			
		Death Catastrophic Illness/Injury	Major Extensive Injuries	Moderate Medical treatment required	Minor No injuries
Likelihood	<b>Almost certain</b> Occurred before/expected	H	H	S	S
	<b>Likely</b> Probably will occur	H	S	S	S
	<b>Moderate</b> May occur at some time	H	S	L	L
	<b>Unlikely</b> Unusual or rare situation	S	L	L	L
		<b>High (H)</b> – cease exposure immediately until protection, approved at senior mgt level, implemented.			
		<b>Significant (S)</b> – procedures alone may not be enough, senior management attention required.			
		<b>Low (L)</b> – may be managed by routine procedures, some risks in this category may be acceptable.			



# Education and training

## Registered Training Organisations

AHCLSK205A – Handle livestock using basic techniques

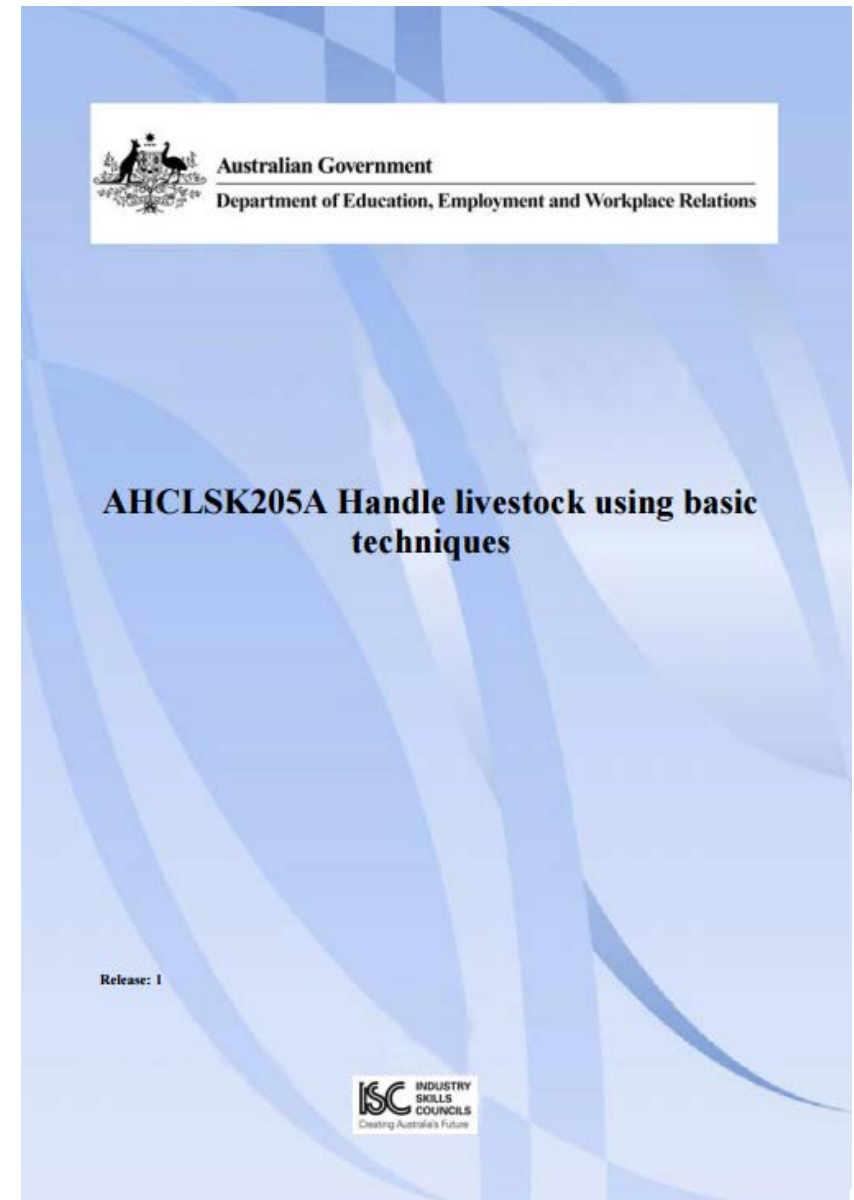
AHCLSK204A – Carry out regular livestock observation

AHCLSK207A – Load and unload livestock

AHCLSK210A – Muster and move livestock

AHCLSK212A – Ride horses to carry out stock work

## Standard Units of Competency





## A practical safety guide

# Beef cattle handling Agriculture

November 2006



An Australian Government Initiative

Farm Health & Safety



**Joint Research Venture**  
Rural Industries R&D Corporation  
Grains R&D Corporation  
Meat & Livestock Australia  
Australian Wool Innovation Ltd  
Sugar R&D Corporation  
Cotton R&D Corporation  
Dairy Australia

## Safe Cattle Handling – A Practical Guide



# Understanding livestock behaviour



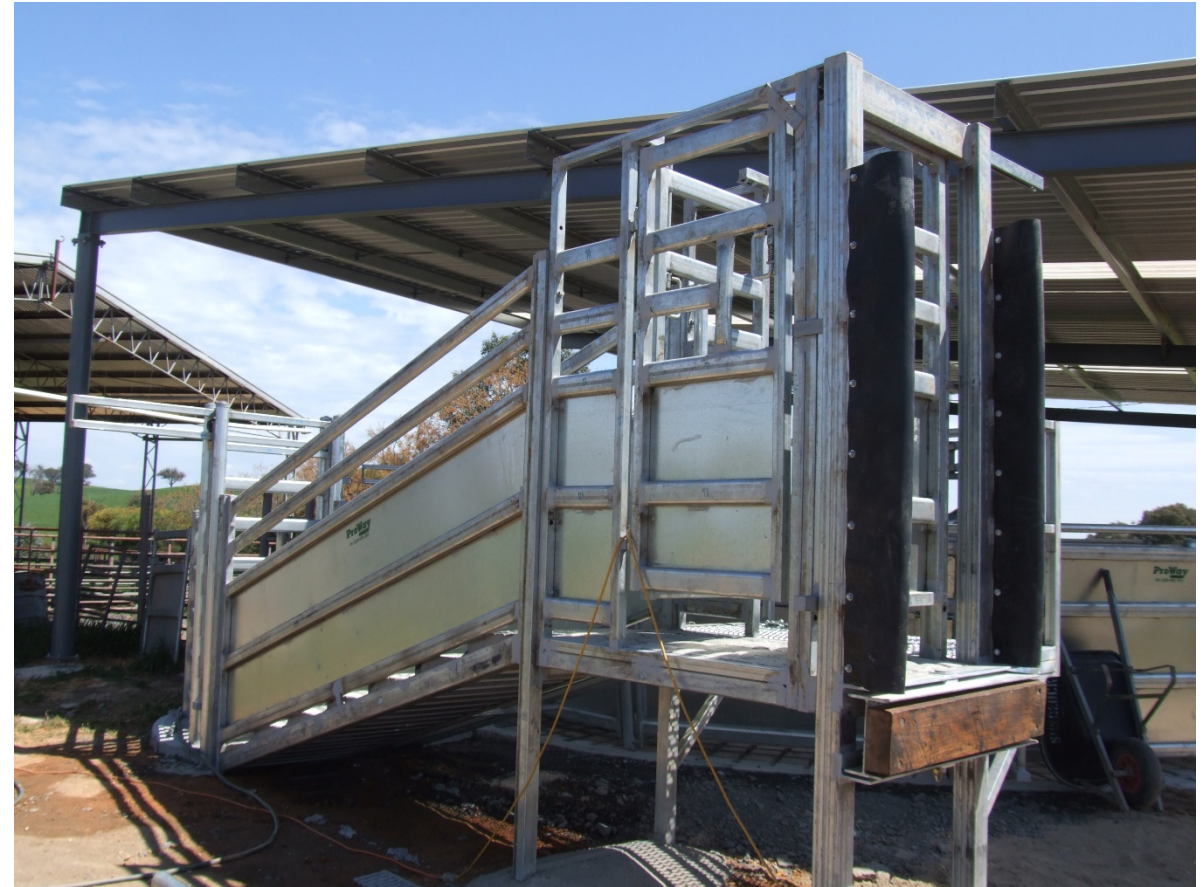
Photo by Rosalie Winard

<http://http://makerboulder.com/who-is-temple-grandin/>



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# Design of handling facilities



# Livestock threatening behaviour



# Handling technique and attitude



Low stress stock handling courses



# Genetic selection for quiet animals

## BreedPlan Docility EBVs

Difference in % of progeny scored as 'docile'

Yard test or crush test

5 point system

Bull A +20

Bull B -10

progeny 15% more docile calves



Bull A

Bull B



.....and suitable personal protective equipment (PPE)

boots

long pants

long sleeved shirt

overalls

hat

50+ sunscreen

sunglasses (eye protection)

and close by:

mobile 'phone

snake bite bandage

first aid kit







