Dairy Australia

Farm safety manual

DELIVERING for DAIRY

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Topics

Section 1

Quad and motorbikes
Farm vehicles
Tractors and mobile plant
Fixed plant

Section 2

Contractors
Confined spaces
Working at heights
Power and electrical

Section 3

Manual handling
Working with livestock
Farm chemicals
Water and effluent

Section 4

Working environment
Visitors, children and traffic

Foreword

Providing a safe environment and workplace for ourselves, our staff, our families and everyone who visits a dairy farm is the most important thing we can do.

Dairy Australia is supporting a whole of industry approach towards a goal of zero deaths on Australian dairy farms.

The Farm Safety Manual has been built, tested and trialled with dairy farmers from across Australia. We have also involved the regulators in each state, key service providers working closely with farmers and milk processors to ensure we are aligned and using the same approach to farm safety.

This resource is broken down into sections that address different areas of a dairy farm and contains specific tools, articles, information and templates to help you build comprehensive safety policies and procedures for your farm.

It will take time to work through this resource and to build a safety system that is suited to your business. The Manual is designed to work through one section at a time, and to engage with others in your business (including your family, your staff and contractors) as you work out what you need.

Our aim is to make safety information accessible and easy to tailor to your business. This includes a range of templates and tools in this folder and online that can be adapted to your needs. You can access these and more farm safety information by visiting: **thepeopleindairy.org.au/farm-safety**

Safety is not a topic that you think about once and then move on; a safe business needs regular attention. The combination of the Manual and the ease of updating your safety material online will save time and effort as you work to keep safety top-of-mind.

You can also access local safety advice and attend safety workshops provided by your Regional Development Program. To find out what is happening locally, visit **dairyaustralia.com.au** and select your region.

David Nation
Managing Director
Dairy Australia

Inside the Farm Safety Manual

Getting started

Induction, Safety System Snapshot, Glossary of safety terms and Incident Report Logs. Start with the Induction Checklist and a simple 'traffic light' process for the farm team to check how you measure up against current Work Health and Safety (WHS) legislation. Refer to farm safety Glossary for WHS common terms. Use the Incident Report Logs to keep records of all injuries, incidents and accidents in the workplace (these records are required by law).

Quads and motorbikes

Number one cause of deaths on farms. A guide to the key questions: Are your quads fitted with Crush Protection Devices? Are your workers trained to operate your particular bikes? Does everyone wear helmets? Do you have rules in place to NOT allow passengers, children under the age of 16 or visitors to ride quads? Does this cover all quads and bikes on the farm – even if they don't belong to you?

Farm vehicles

Risks of run overs and ejection or falling from vehicles. Cars, utes, side-by-sides and trucks are the workhorses of the farm but can cause death or serious injury to drivers, passengers or bystanders of all ages. This topic covers best practice on operating and maintaining vehicles to reduce these hazards.

Tractors and mobile plant

Powerful machines with attachments with moving parts. This topic covers controlling risks around tractors, PTOs and attachments such as front end loaders, post-hole diggers, post drivers, slashers. Telehandlers have become relatively common on farms and require their own risk assessment prior to use.

Fixed plant

Good design and guarding are key. Dairy platforms, pumps and augers expose workers to many hazards, including moving parts, electrical hazards, chemicals and working at heights. Fixed plant is used every day on every farm. This topic covers best practice approaches to using it safely.

Contractors

What safety responsibilities do I have when contractors are working on my farm? Induction process and checklist to highlight the legal safety requirements for using contractors.

Confined spaces

Does my farm have any confined spaces? If so, what do I need to do? Milk vats, silos, tanks and effluent ponds are all likely to be confined spaces that are subject to specific regulations. Identify confined spaces and develop the processes you need to comply with the law.

Working at heights

Serious injuries and fatalities can occur from falls even when from less than 2 metres. Tips on about preventing falls and using ladders and platforms safely.

Power and electrical

Is your powered equipment safe to use? Are powerlines located where they could be a hazard? Highlights the need to always use licensed electricians and to regularly check and maintain electrical switches and leads with Residual Current Device protection.

Manual handling

How to make life easier and more productive on the farm. Backs, shoulders, hips and knees are all at risk with the normal duties on farm. This section encourages the design of systems which minimise manual handling risks.

Working with livestock

Dairy farmers have a lot of direct contact with large animals. Milking and managing dairy cattle brings risks of workers being crushed or kicked. Training and good design of facilities can minimise the hazards of working with stock.

Farm chemicals

Safe use and storage of chemicals is a must. There are a range of chemicals needed on farm that require staff members to be trained in their use, including the PPE to be worn. Secure storage is also a must.

Water and effluent

Drowning is still the number one killer of young children on farms. Water sources on farm include tanks, dams, troughs, channels and effluent ponds. Do they have the appropriate controls in place to prevent access by children?

Working environment

Is your farm a great place to work? Is the farm well set-up for people to work safely and comfortably? This sections looks at suitable lighting, floor covers, noise etc. and includes staff amenities.

Visitors, children and traffic

Visitors and children in the farm workplace need rules and supervision. Having children on the farm is very rewarding for families, but it comes with serious risk. This section looks at ways of protecting children and visitors to the farm.

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety**

Using the manual

The aim of the Farm Safety Manual is to make it straightforward for dairy farmers to build and improve a comprehensive farm safety system.

The manual is designed to cover the legal and practical requirements, while building up background information and records to become a 'living' document on farm.

There are topics that appear in the grid on the previous page which you can work through at your own pace. Each topic starts with explanatory notes and a self-assessment (traffic lights) tool followed by the relevant documents and templates.

As you use the self-assessment tools and read each topic, fold out the Action Plan sheet at the back of this folder to record the steps you want to take to build your farm safety.

Many of the templates are self-explanatory. Others are preceded by notes, a sample and a blank template.

Be sure to take copies of the blank templates before you use them or download copies from **thepeopleindairy.org.au/farm-safety**

In this folder, each topic has a Farm Records section at the back where you can store your completed documents.

Updates and further support

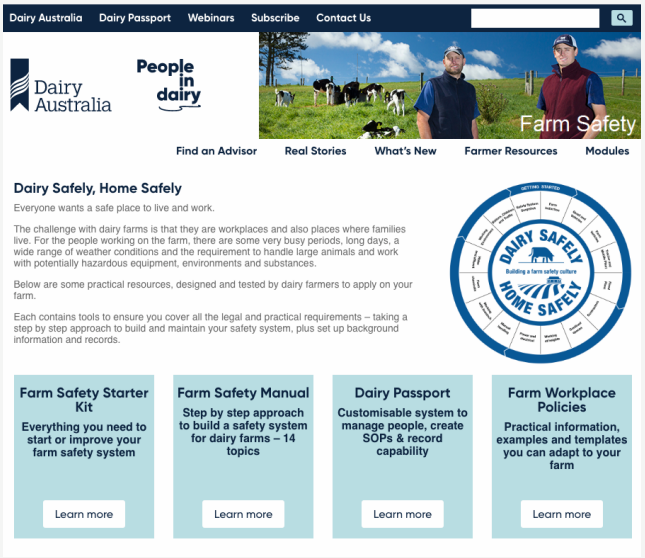
The Farm Safety Manual is a step-by-step approach to building a safety system for dairy farms and keeping this system maintained. In addition to this folder, information and resources are also available online at **thepeopleindairy.org.au/farm-safety**

It's your responsibility to keep your Farm Safety Manual up to date.

One of the challenges of printing is that information can change. Updates are sent electronically only to the email address you provided when you received your folder.

If you're not receiving these, get in touch via: **thepeopleindairy.org.au/contact-us/**

By law: This manual references the Workplace Health and Safety(WHS) laws established by Safe Work Australia as the 'by law' guide to legal requirements relating to dairy farm health and safety matters.



In 2011, Safework Australia developed a single set of WHS laws (based on many of those already established in Victoria) with the objective of uniformity across Australia. These model WHS laws have been separately implemented and are legally binding in New South Wales, South Australia, Tasmania, the ACT, Northern Territory and the Commonwealth. It is expected that Western Australia will eventually adopt these laws.

The model WHS laws include the model WHS Act, the model WHS Regulations and model codes of practice.

Victoria has recently reviewed and amended its health and safety regulations and is in the process of reviewing its codes of practice.

The WHS regulators in each state and territory are responsible for regulating and enforcing the laws in their jurisdictions and some have made minor changes to ensure the legislation is consistent with other laws and processes.

It is important to note that employers and others keep abreast of the specific regulations in their state.

Subscribe to electronic news or update services that your individual state regulator provide so you are aware of relevant information or changes as they occur.

Contents

Safety is a core value of the dairy industry

Dairy farms are interesting, complex and busy workplaces. They are great places to work and need to be safe for everyone. Being, and feeling, safe adds a lot to the quality of the work for your staff and significantly reduces your business risk.

The dairy industry is committed to reducing the number of injuries and fatalities that occur on dairy farms.

There is an industry-wide commitment to 2030 Sustainability Goals of:

- zero workplace fatalities on farm and in manufacturing
- 100% of dairy workers implementing good safety practices
- 30% reduction in Lost Time Injury Frequency Rate for farm and manufacturing (on figures from 2017).

We want everyone to get home safely from work every day.

Workplace safety

All workplaces have the potential to harm the people that work there. Historically, workplaces had a large number of incidents, leading to injuries and death.

Strict workplace safety laws were introduced in all states of Australia some years ago to address this. They seek to encourage increasingly safe workplaces and carry penalties for those who fail to meet their obligations.

Workplace safety refers to the working environment at a business and encompasses all factors that impact the safety, health, and well-being of workers (where 'workers' means all employees, contractors, subcontractors, apprentices, trainees and owner/managers who do work on the farm).

This includes creating a safe workplace by recognising, discussing and controlling hazards and having safe working practices and processes.

Workplace health and safety laws place significant obligations on both employers and employees to maintain a safe workplace.

The resources in the Farm Safety Manual are designed to help you achieve your goals in farm safety.

Hazards, risks and controls

As the farm owner or manager you have the responsibility to ensure that hazards and risks are managed to keep everyone safe.

A **hazard** is something that could cause harm and a risk is the probability of a harm occurring to a person who is exposed to the hazard.

In safety terms, a control for a hazard is a way to remove the hazard or reduce the risk to a person so that harm does not happen.

Assessment of risks should happen on an ongoing basis. An overview assessment should happen on a regular basis too.

Two tools are used in safety thinking – the 'hierarchy of control' for determining the best means to control a hazard and the 'risk assessment matrix' for assessing risks.

Tip

Not sure where to start?

Each module in the Farm Safety Manual provides specific information about an area of safety on dairy farms.

If you know which module you need to work on first, go straight there.

If you are not sure, get an overview of all areas to help set your priorities, by doing the Quick Safety Scans (in the Farm Safety Starter Kit).

Hierarchy of control

To decide the best or most practical way to reduce the risk of injury by an identified hazard, use the 'hierarchy of control'. This ranks the control measures from the highest level of protection to the lowest.

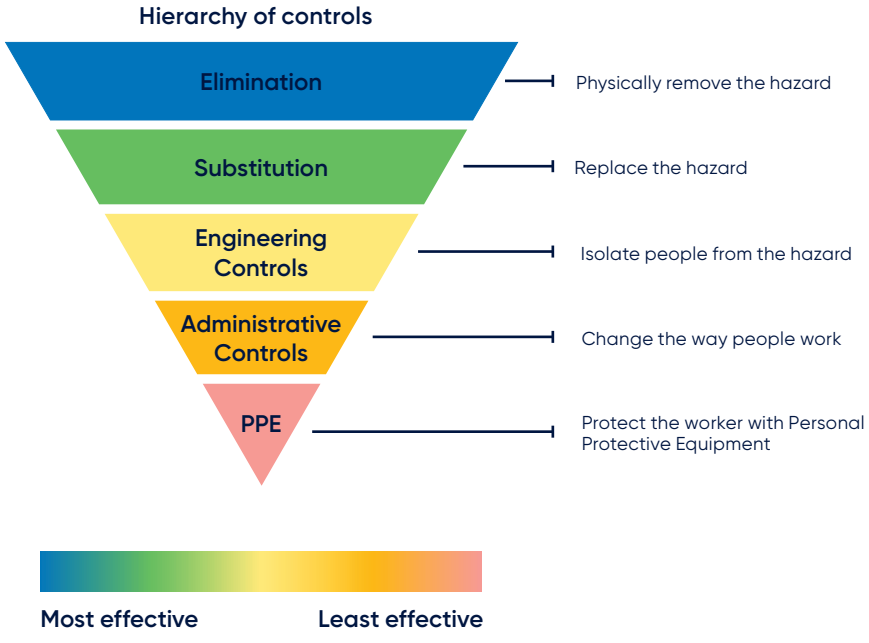
First, try to eliminate the hazard, or if that is not possible, use a safer substitute. If this again is not practicable, consider isolation-engineering control. Next in the hierarchy is an administrative control, such as a safe working procedure, often supported with training. Finally, last in the hierarchy is Personal Protective Equipment (PPE).

To step through the hierarchy of control:

1. Eliminate the hazard (e.g. stop using a particular chemical).
2. Substitute the hazard with a safer option (e.g. use a safer chemical).
3. Use engineering and/or isolation (e.g. apply the chemical using a closed system where it is not handled).
4. Set up administrative controls such as safe operation and training (e.g. have a procedure to be followed when handling the chemical).
5. Use PPE (e.g. wear gloves and face shields). **Note:** PPE only protects the person wearing it.

Many control measures involve a combination of these steps.

Control methods at the top are more effective in protecting people from exposure to hazards. The bottom two rely on people's actions to work safely or fit the PPE. Following this hierarchy normally leads to the implementation of inherently safer systems, where the risk of ill-health or injury can be substantially reduced.



By law

WHS regulations require that a person conducting a business or undertaking must manage risks to health and safety relating to hazards in the workplace. They must:

- Identify reasonably foreseeable hazards that could give rise to the risk.
- Eliminate the risk so far as is reasonably practicable.
- If it is not reasonably practicable to eliminate the risk, minimise the risk so far as is reasonably practicable by implementing control measures in accordance with the hierarchy of control.
- Maintain the implemented control measure so that it remains effective.
- Review, and if necessary revise, risk control measures to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.
- Consult, so far as is reasonably practicable, with workers who are (or are likely to be) affected by the hazard.

By law, you are responsible for everyone who works or comes onto your farm, including all permanent and casual staff, contractors and visitors.

Risk assessment matrix

To rate a risk you have identified and decide on the type of control strategy that will be required, use a risk assessment matrix

A risk assessment matrix is a powerful tool that combines an assessment of the likelihood of an incident happening and the severity of the consequences of the incident, if it does occur.

The example below can be used for safety and environmental risk assessments.

The risk assessment process:

- Step 1 – decide what you think is the most serious consequence that could credibly occur from exposure to the hazard.
- Step 2 – rate how likely you think that consequence is by estimating the timeframe in which it could occur.

Risk Management Matrix

Risk = Consequence x Likelihood

Step 1 **Select credible serious consequence** that could result from exposure to the hazard.

Step 2 **Select likelihood: the time in which the selected consequence could occur** when exposed to the hazard.

			Step 2 **Likelihood (of injury/incident occurring)**				
			Almost Certain	Likely	Possible	Unlikely	Rare
			<1 year	1-2 years	2-4 years	4-10 years	>10 years
Step 1 Consequence (Most credible serious incident)	**Safety**	**Environment**					
	Fatality	Permanent widespread damage	1	2	4	7	11
	Permanent disability	Heavy damage costly restoration	3	5	8	12	16
	Lost Time Injury	Major but recoverable damage	6	9	13	17	20
	Medical treatment injury	Limited medium-term impact	10	14	18	21	23
	First aid injury	Short-term damage	15	19	22	24	25

	Risk rating	**Risk mitigation strategy**	**Risk review frequency**
1–7	**Extreme risk**	Do not proceed with task: implement the 'Hierarchy of Controls', management to be notified, Risk Register	Daily/Weekly
8–14	**High risk**	Implement the 'Hierarchy of Controls', management to be notified, Risk Register, managed with high risk permits	Weekly/Monthly
15–21	**Medium risk**	Implement the 'Hierarchy of Controls', supervisor directly involved, managed with SOPs/SWMS/Permits, Risk Register	3–6 months
22–25	**Low risk**	Implement the 'Hierarchy of Controls', managed using SOPS/ SWMS, Risk Register	6–12 months

From: Jon Temby, Axento Safety 2020

Roles and responsibilities

The person conducting a business or undertaking has a primary duty of care to, as far as is reasonably practicable, ensure the health and safety of workers and others who may be affected by the work.

Workers also have responsibilities to take reasonable care for their own health and safety and the safety of others, and to comply and co-operate with relevant instructions.

Everyone needs to be involved to build a great safety culture on the farm.

Tip

For workers: When you are at work, you have the responsibility to take reasonable care for your own health and safety and the safety of others who might be affected by your actions. As an example,, you should not take short cuts when doing your job that might put yourself or someone else at risk, or play practical jokes that could hurt someone.

You must co-operate with your employer when they are taking action to improve health and safety or to meet their legal obligations. You must follow safety policies and procedures, attend Work Health and Safety training, follow the advice you've been given, and use safety equipment supplied by your employer.

As an example, you must as far as you are reasonably able, wear PPE, such as helmets, in accordance with the information, training and instruction you have received.

Health and safety representatives

The WHS Act recognises that workplaces have better health and safety outcomes when workers have input before decisions are made about health and safety matters that affect them.

Part 5 of the WHS Act allows for workers to be consulted and represented through health and safety representatives and committees. A worker may ask for a Health and Safety Representative (HSR) to be elected to represent them on work health and safety matters.

Where HSRs have been elected, the person conducting a business or undertaking must consult with them.

A Health and Safety Committee (HSC) brings together workers and management to develop and review of health and safety policies and procedures for the workplace. A HSC must be established when a HSR or five or more workers makes a request to the person conducting a business or undertaking.

Learn more

As part of their onboarding, new employees can complete online modules about safety on dairy farms and their responsibilities.

See Dairy Australia's *Starting a job in dairy online* modules:

enlight.dairyaustralia.com.au

There are some differences between states on how Health and Safety Representatives are elected and operate. See the website of the Regulator in your state (listed next page).

Health and safety laws in each state

Safe Work Australia is the body responsible for preparing and revising the model Work Health and Safety Acts, regulations and codes of practice in Australia.

These models have been adopted by the Commonwealth jurisdiction and the states and territories, except Victoria and Western Australia.

Each state has its own acts, regulations and compliance codes and codes of practice. Although some states have adopted the Safe Work Australia model, individual states continue to make amendments.

Regulating and enforcing the laws is the responsibility of the individual state and territory.

Each state has its own range of information and guidance material including that relevant to agriculture. See the website of the regulator in your state for detailed information and resources.

New South Wales (NSW)

- **Act:**
  Work Health and Safety Act 2011 (NSW)
- **Regulations:**
  Work Health and Safety Regulation 2011 (NSW)
- **Codes:**
  NSW Codes of Practice
- **Regulator:**
  Safe Work NSW

Queensland (QLD)

- **Act:**
  Work Health and Safety Act 2011 (QLD)
- **Regulations:**
  Work Health and Safety Regulation 2011 (QLD)
- **Codes:**
  Qld Codes of Practice
- **Regulator:**
  Workplace Health and Safety Queensland

South Australia (SA)

- **Act:**
  Work Health and Safety Act 2012 (SA)
- **Regulations:**
  Work Health and Safety Regulation 2012 (SA)
- **Codes:**
  SA Codes of Practice
- **Regulator:**
  SafeWork SA

Tasmania (Tas)

- **Act:**
  Work Health and Safety Act 2012 (TAS)
- **Regulations:**
  Work Health and Safety Regulation 2012 (TAS)
- **Codes:**
  TAS Codes of Practice
- **Regulator:**
  WorkSafe Tasmania

Victoria (Vic)

- **Act:**
  Occupational Health and Safety Act 2004 (VIC)
- **Regulations:**
  Occupational Health and Safety Regulations 2007 (VIC)
- **Codes:**
  VIC Compliance Codes
- **Regulator:**
  WorkSafe Victoria

Western Australia (WA)

- **Act:**
  Occupational Safety and Health Act 1984 (WA)
- **Regulations:**
  Occupational Safety and Health Regulations 1996 (WA)
- **Codes:**
  WA Codes of Practice
- **Regulator:**
  WorkSafe WA

Workplace manslaughter laws

The business and personal consequences of work-related fatalities on farm significantly changed in Victoria on 1 July 2020 as new workplace manslaughter laws came into effect.

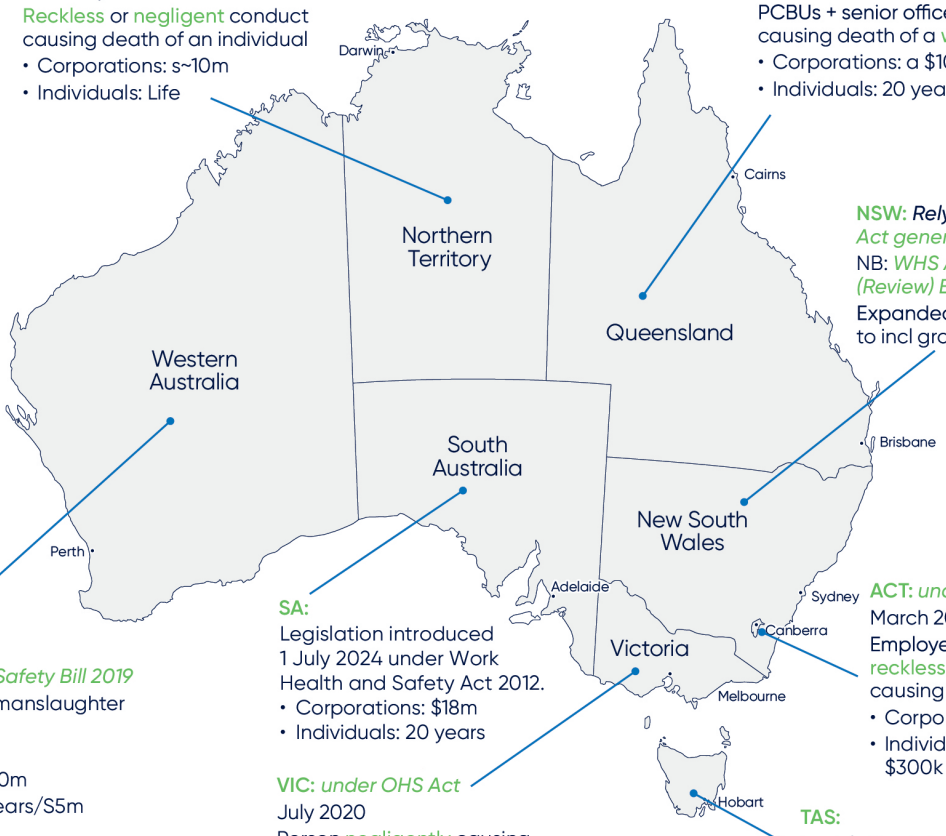
While the expectation around what happens on farm to control WHS/OHS risks has not changed, businesses and/or individuals convicted of workplace manslaughter may now be issued large fines and even jail terms.

This brings Victoria into line with some other Australian jurisdictions (shown in green lettering below).

By law

The business and personal consequences of work-related fatalities now include very large fines and jail terms.

Workplace manslaughter laws across Australia



NT: *under WHS Laws*
February 2020
Reckless or negligent conduct causing death of an individual
- Corporations: s~10m
- Individuals: Life

QLD: *under WHS Laws*
October 2017
PCBUs + senior officers negligently causing death of a worker
- Corporations: a $10m work
- Individuals: 20 years

NSW: *Relying on Crimes Act general manslaughter*
NB: *WHS Amendment (Review) Bill 2020*
Expanded Cat 1 offence to incl gross negligence

WA:
Work Health and Safety Bill 2019
2- level industrial manslaughter offences
Crime
- Corporations: $10m
- Individuals: 20 years/S5m

Simple
- Corporations: $5m
- Individuals: 10 years/$2.5m

SA:
Legislation introduced 1 July 2024 under Work Health and Safety Act 2012.
- Corporations: $18m
- Individuals: 20 years

ACT: *under Crimes Act*
March 2004
Employers+ officers recklessly or negligently causing death of a worker
- Corporations: ~$1.6m
- Individuals: 20 years+ $300k

VIC: *under OHS Act*
July 2020
Person negligently causing death of a person* (incl. public).
- Corporations: $16.5m
- Individuals: 25 years

*Employees and volunteers exempt

TAS:
Legislation introduced 1 Oct 2024 under Work Health and Safety Act 2012
- Corporations: $18m
- Individuals/PCBU's: 21 years

Safety factors on your farm map

Dairy farm maps are used for everything from day-to-day management to long-term strategic planning and are essential for communication with contractors and workers on the farm.

Your main map might be on the wall, but it should also be printable to include with instructions to contractors.

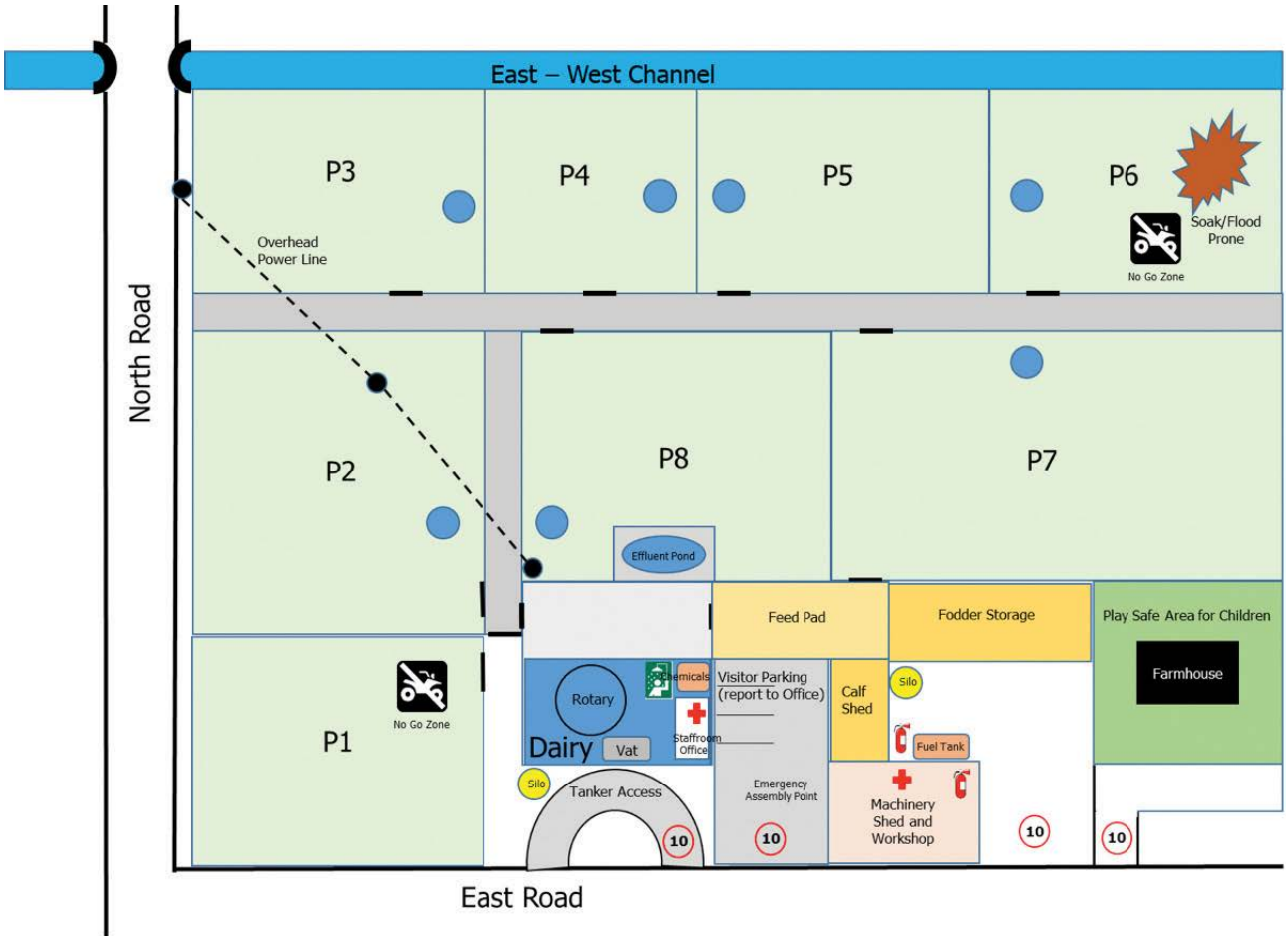
To support your safety messages and actions include:

- entrances for domestic vehicles, or trucks only (including milk tanker)
- location of major facilities e.g. houses, dairy buildings, yards, fuel tanks
- loading and unloading sites
- parking for visitors
- reporting point e.g. office at dairy
- tracks, gates and fences, crossings, bridges, paddock numbers or names
- dams, watercourses and effluent ponds (include channels and drains), windmills, irrigators
- overhead power (and underground if absolutely certain)
- any major hazards such as chemical store, wells, flooding prone areas and soaks
- 'no go' zones for quads and tractors
- location of first aid kits and fire extinguishers
- emergency assembly areas.

Enlargements of the areas around the dairy or main traffic areas may be required for some details.

Also include the GPS coordinates for house, dairy and/or front gate, emergency contact details and reinforcements such as speed limits and likely presence of children.

Farm map example



Induction Checklist

Be prepared and plan the first few days for every new employee

The first few days on a new job can be daunting. Take the time to plan some induction activities for your new employee. Include:

- introducing them to other staff and any important clients or suppliers
- giving them the grand tour of your workplace, including WHS policies, emergency procedures and exits, to make sure they know where to find everything they'll need to do their job
- any formal or informal training, such as operating machinery
- giving them time to find their way around and settle in.

As an employer, you will need to allow adequate time for yourself or a supervisor/ manager to ensure new employees receive appropriate induction training and support, including all aspects of a workplace health and safety induction on the farm.

Staff induction activities should be designed to provide employees with the information they need to do their job effectively, enjoyably and safely.

No employee can walk into a new job and be fully effective from the first day – effectiveness grows with an understanding of the farm and the details of its operation. Overall, employees perform better and are more likely to stay in the job longer, when they are clear about what is expected of them from the beginning. It is important to ensure that every employee receives appropriate induction training.

New employees can complete online modules as part of their onboarding about safety on dairy farms and their responsibilities. This can occur before the arrive to work on the farm.

See Dairy Australia's *Starting a job in dairy* online modules: **enlight.dairyaustralia.com.au**

Step 1: Arrange a time with your new employee for an induction to the basics before you put them to work

The use of an induction program checklist ensures that all necessary areas are covered. Use the checklist to have everything in place before you meet with your employee and to schedule the various components, including booking time with other staff involved (e.g. the bookkeeper regarding paperwork) and various subcontractors.

Step 2: Meet and show your new employee around the farm

Induction continues until the probationary period is finished. Ask the new employee to sign the checklist after the induction program, and preferably before they start work. You will then have an acknowledgment that the employee has been shown the basics of the position.

Throughout the induction period:

- explain the **Farm Policies and Systems** you use to manage on-farm safety and incidents such as accidents, injuries, emergencies or discrimination
- identify any training required
- allow your new staff member to ask questions, particularly if they don't fully understand something, stressing that no question is dumb
- be supportive rather than just 'ticking the box' on induction.

Advice and templates are available to help you develop your farm procedures and policies and keep necessary records of any incidents.

Note

The Farm Safety Manual complements the Employment Starter Kit initiative (ESKi) which contains more information about managing induction.

Visit thepeopleindairy.org.au/eski

Induction Checklist

Employee's name:

Area	Action to be taken	Date	Initial
Introduction to the farm business	☐ History of the business		
	☐ Goals of the business		
	☐ Culture and values (code of conduct)		
	☐ The team (organisational chart)		
	☐ The farm map		
	Other:		
Terms and conditions of employment	☐ Position description		
	☐ Probationary period		
	☐ Hours of work		
	☐ Leave		
	☐ Pay amount, method, frequency		
	☐ House set up – power and phone		
	☐ Training needs, plan		
	Other:		
Paperwork	☐ Contract or letter of engagement - signed and copy for both parties		
	☐ Tax declaration		
	☐ Superannuation		
	☐ Employee details form		
	☐ Proof of qualifications, work permit (if not Australian), driver's licence, other licences such as chemical users certificate, first aid, forklift licence		
	☐ Bank account details		
	☐ Reimbursements		
	Other:		

Employee's name:

Area	Action to be taken		Date	Initial
Rosters, applying for leave	☐	When rosters are available		
	☐	Time recording		
	☐	Reporting absences		
	☐	How to apply for time off		
	Other:			
Company policies	☐	Work clothing		
	☐	Personal health and hygiene		
	☐	Drug and alcohol policy		
	☐	Anti-discrimination and harassment policy		
	☐	Sexual harassment policy		
	☐	Return to work policy		
	☐	Disciplinary and grievance procedures, conflict management		
	☐	Policy for when visitors/contractors are on the farm		
	☐	Privacy		
	☐	Personal visits, telephone calls etc.		
	Other:			
WHS procedures	☐	Personal protective equipment issued		
	☐	Manual handling		
	☐	Electrical safety		
	☐	Chemical safety		
	☐	Workshop safety		
	☐	Cattle handling		
	☐	Working on your own – communications		
	☐	Hazard, injury and accident procedures and reporting		
	Other:			

Employee's name:

Area	Action to be taken		Date	Initial
Emergency procedures	☐	Who to contact in an emergency		
	☐	Trained first aiders		
	☐	First aid stations/kits		
	☐	Fire safety equipment		
	☐	Emergency assembly points		
	☐	Evacuation procedure		
	Other:			
Operating machinery	☐	Milking machinery		
	☐	Quad bike, motor bike		
	☐	Chainsaw		
	☐	Tractors and attachments		
	Other:			
Farm tour and general information	☐	Dairy		
	☐	Toilets and facilities		
	☐	General tour, identification of hazards		
	☐	Telephone answering and messages		
	☐	Computer systems		
	☐	Location of manuals		
	Other:			

Employee's name:

Area	Action to be taken		Date	Initial
Work Health and Safety procedures	☐	Staff (their roles, responsibilities)		
	☐	Supervisors		
	☐	Owners, management		
	☐	Other people living on the farm		
	☐	Contractors, suppliers, vet		
	☐	Neighbours		
	☐	Local organisations, clubs		
	Other:			
Introduction to the specific job tasks	☐	Arrangements for walk through each element of job		
	☐	'Buddy'		
	Other:			

Other comments:

Induction conducted by (name):

Date of induction:

Employee's signature:

Safety Systems Snapshot

The Safety Systems Snapshot provides an overview of your current farm safety system compared to WHS legislation.

We have checked the snapshot with the Safety Regulatory Authorities who have agreed that it provides a practical guide covering the current legislation regarding safety on-farm..

Using the Safety Systems Snapshot:

It is a good idea to fill out the Snapshot with the whole farm team – however, you may decide to do it on your own.

1 The Snapshot has a traffic llight system to indicate how you rate for each step.

2 There are six steps to go through.

3 Start with Step 1 and work across ticking Red, Orange or Green in each row .

4 Work through the six steps and 25 rows – you will end up with 25 ticks in total.

5 If you identify areas for improvement, add them to the Action Plan.

6 Revisit the Snapshot every 6–12 months to check how you have progressed. You can download another copy at **thepeopleindairy.org.au/farm-safety**

	Poor practice Each Tick in the Red Zone means you are less likely to be working safely on the farm. **Address these areas immediately!**	Improving safety practice Each Tick in the Orange Zone means you are increasing the level of safety on the farm. **There is still work to be done**	Great safety practice Each Tick in the Green Zone means you are more likely to be working safely on the farm. **Monitor and review to continually improve**
Step 1: Setting Up a Safe Workplace	☐ No clear understanding of safety responsibilities	☐ Safety responsibilities identified but not always understood or operating effectively	☐ Manager and worker safety responsibilities clearly understood and acted upon
	☐ No time or money allocated to meet safety responsibilities	☐ Insufficient time and money allocated to meet safety responsibilities	☐ Sufficient time and money allocated to meet safety responsibilities
	☐ Safety not a priority	☐ Safety not always a priority	☐ Manager/s promote safety as a high priority
	☐ No safety initiatives	☐ Limited involvement by Manager/s in safety initiatives	☐ Manager/s involved in all safety initiatives
	☐ Manager/s set a poor safety example	☐ Manager does not always lead by example	☐ Manager leads by example
Step 2: Consulting (Employee Engagement)	☐ No consultation processes in place	☐ Consultation processes in place but not always working effectively	☐ Agreed consultation processes are used to discuss safety issues and are working effectively
	☐ Workers are not involved in safety issues	☐ Workers are not always involved in safety decisions and developing procedures	☐ Workers are involved in safety decisions and developing procedures
	☐ Workers views are not valued or taken into account	☐ Workers views are not always valued and taken into account	☐ Workers views are valued and taken into account
	☐ Feedback from employees is discouraged	☐ Feedback from employees is listened to	☐ Feedback from employees is actively encouraged
Step 3: Managing Hazards	☐ Tasks with safety risks not identified nor the risk controlled	☐ Only some of the safety risks have been identified and the risks controlled	☐ All tasks with safety risks have been identified and the risks controlled
	☐ No safe work procedures developed	☐ Limited development, implementation and review of safe work procedures	☐ Safe work procedures are developed, implemented and reviewed for all these tasks
	☐ Responsibility for doing tasks safely is left up to the worker	☐ Safe work procedures developed but not always followed	☐ Procedures are followed in day-to-day operations

	Poor practice	Improving safety practice	Great safety practice
Step 4: Informing, Training and Supervising	☐ Workers not inducted	☐ Induction in safe work procedures occurs but is incomplete	☐ All workers/contractors inducted and signed off for the farm
	☐ No safety training provided	☐ Some workers are not trained to ensure they are able to do their tasks safely	☐ Workers are trained in safe work procedures before starting tasks
	☐ Workers not made aware of safety issues	☐ Workers are sometimes made aware of safety issues	☐ Workers/Contractors are always made aware of safety issues
	☐ Ability of workers to do tasks safely is not checked	☐ Workers are sometimes asked to demonstrate that they can do their tasks safely	☐ Workers are always asked to demonstrate that they can do their tasks safely
	☐ No safety supervision	☐ Supervision does not always result in safe work procedures being followed	☐ Workers are supervised, where necessary, to ensure safe work procedures are followed
Step 5: Maintaining a Safe Workplace	☐ Safety scans are not carried out at all	☐ Safety scans are not carried out regularly	☐ Regular safety scans are carried out to detect hazards
	☐ Workplace tools and equipment are not maintained	☐ Some workplace tools and equipment maintained	☐ Workplace tools and equipment are maintained
	☐ Workers not provided with easy to understand information and training on how to do their job safely	☐ Workers not always provided with easy to understand information and training on how to do their job safely	☐ Workers are provided with easy to understand information and training on how to do their job safely
	☐ No process set up for reporting accidents and incidents	☐ There is an accident/incident reporting process but it isn't understood by all workers	☐ There is an accident/ incident reporting process understood by all workers
	☐ No emergency plans	☐ Plans in place for some emergencies only	☐ Plans are in place for all emergencies
Step 6: Keeping Records	☐ Accidents/Incidents not reported	☐ Some incidents reported, but follow-up action limited	☐ Safety issues and incidents are reported and acted upon, including notifications required by law
	☐ No review of work practices following an incident	☐ Safe work procedures and training not always reviewed following incident reports	☐ Safe work procedures and training reviewed following incident reports
	☐ No records kept of training or induction	☐ Safety training records, including induction, not up to date	☐ Safety training records, including induction, are up to date
	DATE REVIEWED:	**REVIEWER:**	

Recording hazards, incidents and injuries

All injuries, accidents and incidents that occur in the workplace must be recorded and in some serious cases, also be immediately reported to your state workplace safety authority (see section on Notifiable Incidents below).

When everyone feels positive about reporting any hazards that they see, you have a strong foundation for your farm safety program.

Best practice

1. Ensure all work-related injuries, accidents and incidents are recorded.
2. Report notifiable incidents to your state workplace safety authority immediately.
3. Investigate all injuries, accidents and incidents, record the findings and the follow-up.
4. Ensure hazards and near-misses are also reported and recorded.
5. Retain details of all accident and incident records for at least five years.

Internal reporting

You may think that the less you hear about incidents or near misses, the better. However, reports of hazards or incidents should be welcomed and encouraged – they enable you to take corrective action where necessary and reduce the likelihood of future problems.

It's essential that everyone is comfortable reporting safety or health issues to you as soon as they notice them and you are prepared to listen and act.

You don't need an elaborate reporting system – it could be a folder in the workshop or lunchroom. It simply needs to be a process that everyone is encouraged to use.

When a work-related injury (minor or major) has occurred the injured person must:

- Report the injury or illness to their supervisor or employer as soon as possible.
- Enter the details in the injury and incident register or have another person complete the register.
- Obtain a Workcover medical certificate from the treating doctor, where the injury requires such treatment, and give the certificate to the employer.

All work-related injuries, accidents and incidents must be thoroughly investigated as soon as possible and controls put in place to prevent them recurring.

Employers should document all of the investigation procedure to ensure all aspects are covered.

Once an investigation has been completed, it is important to follow through and implement any recommendations.

You need:

- a way of recording hazards and near misses
- a register of injuries, accidents and incidents
- an approach for investigating injuries, accidents and incidents.

Tips

Set up these records using the templates in this section of your Farm Safety Manual.

Make sure everyone knows where they are and how and when to fill them in.

Information and templates provided in this folder are also available at thepeopleindairy.org.au/farm-safety

Tips

'If you are injured at work' poster (*see next page*) must be displayed in the workplace. These are available from your worker's compensation insurer or can be downloaded from your state work cover authority.

If you are injured at work

1. Seek medical treatment

The most important thing to do if you have a work-related injury or illness is to seek appropriate medical treatment.

2. Tell your employer

You should report any work-related injury or illness to your employer as soon as possible. If you (or someone on your behalf) haven't notified your employer in writing within 30 days of becoming aware of the injury, you may not be entitled to compensation.

The easiest way is to record the details of your injury in the Register of Injuries at your workplace or, if you can't access that, give your employer written particulars of your injuries.

3. Fill in and lodge a claim form

You must lodge a WorkSafe approved claim form if you want to claim WorkSafe entitlements for a work-related injury or illness.

By law, your employer can't refuse your claim, and can't dismiss you for making one.

Worker's Injury Claim Forms for claiming weekly payments and treatment expenses can be downloaded from the WorkSafe website or obtained from Post Offices and WorkSafe branches.

If you're unable to perform your normal duties, you'll need a Certificate of Capacity from your medical practitioner. Give the completed Certificate of Capacity and your Worker's Injury Claim Form to your employer as soon as you can.

As an approved self-insurer your employer will manage your claim.

If you disagree with a decision relating to your claim, your employer, union, WorkCover Assist or Union Assist may be able to help. You can also contact the Accident Compensation Conciliation Service on freecall 1800 635 960 or (03) 9940 1111 or conciliation.vic.gov.au

4. Benefits & Support

If you have a work-related injury or illness, you may be entitled to:
- reasonable costs for medical and like services
- weekly payments if you lose income or require time off work
- a lump sum payment if you have a permanent impairment
- sue for damages at common law for injuries received on or after 20 Oct 1999.

Return to work. Return to life.

Getting back to work after injury or illness is an important step in your recovery. Job satisfaction and social contact are some of the things you might miss when you're not at work.

The most important person in your recovery is you. Actively participating in your rehabilitation and talking regularly to your employer and doctor can help you recover and return to work.

Your employer contact:

_____

_____

Ph: _____

To find out more about your rights and obligations as an injured worker, visit Injury & Claims at worksafe.vic.gov.au or telephone WorkSafe's Advisory Service on freecall 1800 136 089

State Government Victoria

WorkSafe VICTORIA

Notifiable incidents

Your state workplace safety authority must be notified immediately of incidents on the farm that result in death, serious injury or impose a serious risk to health to any person.

What classifies as a notifiable incident differs from state to state. Below is a summary of incidents that require notification in Victoria and New South Wales:

- death or serious injury to a worker
- illness of a worker related to a work process
- exposure to bodily fluids that presents a risk of transmission of blood-borne diseases
- collapse of structure
- uncontrolled escape of gas, dangerous goods or steam
- overturning licensed plant and machinery
- exposure to chemicals from a spill
- uncontrolled explosion or fire
- any incidence of violence at work.

For more details about notifiable incidents, see the Working Environment topic in this Farm Safety Manual. Failing to report a notifiable incident is an offence and penalties apply.

Tips

- The incident scene must not be disturbed until instructed by a WorkCover inspector.
- **To notify the workplace safety authority in your state or if you are in doubt about your notification, phone:**

VIC	13 23 60
NSW	13 10 50
TAS	1300 366 322
QLD	1300 362 128
SA	1800 777 209
WA	1800 678 198

Recording Safety Incidents Checklist

- ☐ Does everyone working on the farm record all hazards and near misses?
- ☐ Do you have a register of all work-related injuries, accidents and incidents?
- ☐ Do you investigate all injuries, accidents and incidents and keep a record of your findings and follow-up?
- ☐ Do you keep your records in an accessible place for at least five years?

Injury and Incident Register

*** Insert Manager's name and contact details before proceeding ****

Date of entry:

Name of person injured: Date of birth:

Status (employee, contractor, visitor):

Address:

Signature (injured person or person reporting):

Details of injury or incident

Date of entry or incident: **Time:** **am/pm**

Date reported: **Time:** **am/pm**

Injury/incident reported to:

Injury/incident location:

Activity engaged in at time of injury incident:

Details of the injury

Cause of the injury incident:

Name of witness(es):

First aid attendant (if applicable):

First aid treatment (if applicable):

Name and address of doctor (if applicable):

Completed by:

Notification:

Police:

Workcover Authority:

Insurer:

*** File this document in the relevant farm folder and retain for five years. ****

Injury and Incident Investigation Report

All work-related injuries, accidents and incidents must be investigated as soon as possible and controls put in place to prevent them recurring.

The investigation should thoroughly analyse the injury or incident, determine the cause(s) and identify actions necessary to prevent it happening again.

*** Insert Manager's name and contact details before proceeding ***

Date of report: Date of incident:

Location of incident:

Investigation team

Manager or supervisor:

Employee or other person working on the farm:

Check boxes as appropriate

- ☐ lost time
- ☐ medical treatment
- ☐ first aid
- ☐ none
- ☐ reported to Workcover insurance agent

Details of damage (plant/equipment/property)

Details of injury/incident

Key contributing features

Injury and Incident Investigation Report

Immediate causes

Underlying causes

Intermediate action taken to prevent further risk of injury or recurrence

Recommendations

Action and responsibilities

Completion date:

Name of manager or supervisor:

Signature:

*** File this document in the relevant farm folder and retain for five years. ****

Hazard or Near-Miss Report

To be completed by an employee or contractor reporting a hazard or near miss.

*** Insert Manager's name and contact details before proceeding ****

Position:		Date:	Time:	am/pm
Reported by:			Position:	
Signature:		Date:	Time:	am/pm

Worker/Contractor to complete

Type of incident or hazard (please tick):

☐	Incident	☐	Near miss
☐	Hazard	☐	Hazardous work practice

Location:

Description of the incident, hazard or near miss:

Management to complete

Name of manager or supervisor:

Corrective action taken:

Further action required:	Person responsible:	Date to be done:

Signature:		Date:	Time:	am/pm

*** File this document in the relevant farm folder and retain for five years. ****

Farm Safety Glossary

This glossary provides easy-to-understand definitions of common workplace health and safety terms. It does not attempt to provide strict legal or technical definitions.

Act – See *Work Health and Safety Act*.

Administrative controls – changes to the way people work to limit or prevent their exposure to a hazard. Examples of administrative controls include: changes to procedures, training, installation of warning signs and labels, such as having a 'confined space' warning sign on a milk vat. *See also Hierarchy of control*.

Australian Standard (AS) – an Australian Standard published by Standards Australia, sometimes published jointly with Standards New Zealand (AS/NZS). Standards set out specifications and procedures and are designed to ensure products, services and systems are safe, reliable and consistent. Standards are voluntary documents unless referenced by government in legislation. For more information see **standards.org.au**

Code of Practice (CoP) – an approved code of practice is a practical guide to achieving the standards of health, safety and welfare required by the relevant Work Health and Safety (WHS) laws. Codes do not have the same legal force as regulations.

Competent person – a person who through training, qualification or experience has acquired the knowledge and skills to carry out the task.

Consultation – the sharing of information and exchange of views on workplace health and safety matters between managers and workers or their representatives. This may include participating in decision-making on WHS issues.

Controls – measures taken to eliminate or reduce risk to health and safety. Examples include: engineering controls, administrative controls, personal protective equipment. A combination of these controls may be used to minimise risk, so far as reasonably practicable, if a single control is not sufficient. *See Hierarchy of control*.

Dangerous goods – through inappropriate handling or use, these substances can often result in injury to people and/or damage to property. Examples include: flammables, corrosives, explosives and chemically reactive and oxidising chemicals.

Due diligence – taking reasonable steps to protect the health and safety of workers, including compliance with WHS duties.

Duty of care – a moral and legal obligation to look after the health and safety of people at work. Examples include: employers must, as far as reasonably practicable, provide and maintain a work environment in which employees are not exposed to hazards; employees must take reasonable care for their own safety and health, and that of others at work.

Emergency plan – detailed written procedures for workers and others when responding to an emergency, such as a fire or a chemical spill. An emergency plan is necessary to maintain order and minimise the effects of the disaster.

Engineering controls – a category of risk control that uses physical/mechanical methods to eliminate or minimise the risk when exposed to a hazard. Examples include: ROPs on tractors, guards, barriers, exhausts, safety switches. *See also Hierarchy of control.*

Ergonomics – a focus on the interaction between people and the work environment by designing or arranging the workplace, equipment and work practices to fit the people who use them.

FarmSafe organisations – independent, non-government, not-for-profit organisations (national and state based) that bring together farmers, safety and health professionals, agricultural organisations and the wider community to promote awareness and adoption of health and safety practices on farms. For example, they provide resources and run events such as Farm Safety Week. For more information see **farmsafe.org.au**.

First Aid – the immediate care given to a person who is injured or who suddenly becomes ill. It can range from disinfecting a cut and applying a bandage to helping someone who is choking or having a heart attack.

Guarding – use of any device or combination of devices designed to keep any part of a person's body out of the danger zone of a machine during its operating cycle. This usually involves guarding the point of operation, guarding power transmission components by fixed enclosures, and/or protecting the operator and nearby workers from flying fragments (an example of an engineering control).

Hazard – anything (including work practices or procedures) that has the potential to cause harm to a person.

Hazardous substance – any substance that may |produce adverse health effects to people exposed to the substance (some may also be dangerous goods)

Hierarchy of control – a method of deciding the best, or most practical way to reduce the risk of injury by an identified hazard. Control measures are ranked from the highest level of protection to the lowest. The hierarchy

generally is first to eliminate the risk (e.g. stop using a particular chemical). If this is not practicable, substitute (e.g. use a safer chemical). If this again is not practicable, consider isolation-engineering control (e.g. chemicals are applied using a closed system where they are not handled). Next in the hierarchy is an administrative control such as a safe working procedure (e.g. procedure to be followed when handling the chemical), often supported with training. Last in the hierarchy is Personal Protective Equipment (PPE) which must be worn to protect the user (e.g. gloves and face shields). Many control measures involve a combination of the above.

Incident investigation – the process of systematically gathering and analysing information about an incident, to identify the causes and make recommendations to prevent the incident from occurring again.

Induction – instruction provided to workers and others on the safety and health requirements of the workplace, including policies, practices and procedures, requirements for particular tasks and hazards that exist and the potential risks. Induction can be integrated into the broader scope of instruction about the workplace.

Inspectors – appointed to ensure compliance to the relevant state work health and safety legislation. They must carry identification and have the power and right to enter any workplace and issue investigation, improvement or prohibition notices.

Job Safety Analysis (JSA) – looks at the work task to determine the safest way to complete it.

Manual handling – an activity requiring the use of force exerted by a person to lift, lower, push, pull, carry or otherwise move, hold or restrain a person, animal or thing.

Material Safety Data Sheet (MSDS) – *see Safety Data Sheet (SDS).*

Near miss – an incident that had the potential to cause harm but didn't because of timely intervention (and/or chance).

Notifiable incident – an incident involving the death of a person, serious injury or illness of a person or a dangerous incident that must be notified to the state's relevant Worksafe authority within 48 hours.

Occupational Health and Safety (OHS) – refers to ensuring the health, safety and welfare of employees and others at a workplace bythe prevention of accidents, injury and illness. The term Work Health and Safety (WHS) is also used.

Person Conducting a Business or Undertaking (PCBU) – a person conducting a business or undertaking, alone or with others, whether or not for profit or gain, including as a partnership, a self-employed person, and as an unincorporated association. This phrase also includes 'employers'.

Personal Protective Equipment (PPE) – anything worn by a worker to reduce the risk of injury when exposed to particular hazards. Examples include: gloves, ear plugs, helmets, safety goggles, respirators, safety boots and sunscreen.

Plant – covers a diverse range of items from office equipment to farm machinery. Examples include: tractors, lifts, forklifts, hand tools, ladders and computers. Any machinery, equipment or appliance.

Practicable – a term often used in the context of 'what is reasonably practicable?' when deciding risk control measures. 'Practicable' is defined as having regard to:

- the likelihood of a hazard or risk occurring
- the potential seriousness of injury or harm
- knowledge about the hazard or risk, and ways of eliminating or reducing it
- the availability and suitability of ways to remove or reduce the hazard or risk
- cost of eliminating or reducing the hazard or risk.

Regulations under the Act – these spell out specific requirements under the WHS Act and have the force of law. They set minimum requirements for specific hazards or work practices; and set requirements for registration of plant, licensing or granting of approvals or certificates.

Regulators – State, territory and commonwealth authorities that administer the relevant OHS/WHS laws under their jurisdiction. See WorkSafe authorities.

Risk – the likelihood of a worker suffering an injury or ill-health as a result of exposure to a hazard.

Risk assessment – the evaluation of the probability and consequences of injury or illness arising from exposure to an identified hazard.

Risk control – taking action to eliminate or reduce health and safety risks so far as is reasonably practicable. Eliminating a hazard will also eliminate any risks associated with that hazard. *See also Hierarchy of control.*

Risk management – the process of identifying hazards, assessing the risk, putting in place control measures and evaluating, monitoring and reviewing the outcomes.

Safe Work Australia – a national body which leads the development of policy to improve work health and safety and workers' compensation arrangements across Australia. It has representatives from state and Commonwealth governments, workers and employers. It does not regulate work health and safety laws.

The Commonwealth, states and territories retain responsibility for regulating and enforcing work health and safety laws in their jurisdiction. For more information see **safeworkaustralia.gov.au/whs-authorities-contact-information**.

Safety Data Sheet (SDS) – contains up-to-date, detailed information about specific substances, including the possible health and safety hazards of a product and how to safely store, use and handle the product. Information on first aid and personal protective equipment is also supplied.

Standard Operating Procedure (SOP) – a written instruction for a task that outlines the preferred and safest method of undertaking a task or activity based on a risk assessment and task analysis. (Also known as a Safe Work Procedure or SWP).

Task – a set of related steps that make up a discrete part of a job. Every job is made up of a collection of tasks. For example, cupping up or applying teat spray are tasks of a milker's job.

Task analysis – a technique used to identify, evaluate, and control health and safety hazards linked to particular tasks. A task analysis systematically breaks tasks down into their basic components. This allows each step of the process to be thoroughly evaluated. Also known as job task analysis.

Work Health and Safety (WHS) – refers to ensuring the health, safety and welfare of workers (employees and others at a workplace) by prevention of accidents, injury and illness. The term Occupational Health and Safety (OHS) is also used.

Work Health and Safety Acts – are the laws in each state and territory that provide a legally binding framework to protect the health, safety and welfare of all workers. They also protect the health and safety of others who might be affected by the work your business does. In addition they outline fines and penalties for breaking these laws. Also see Regulations under the Act.

Workcover – compulsory insurance for employers which is funded by their contributions. It provides employers with insurance cover for the cost of benefits if their workers are injured or become ill as a result of work.

WorkSafe (or SafeWork) authorities – WorkSafe Victoria, SafeWork SA, WorkSafe WA, WorkSafe Tasmania, SafeWork NSW, Workplace Health and Safety Queensland, WorkSafe ACT/NT WorkSafeWorkSafeACT, NT WorkSafe. – Statutory authorities of states and territories with responsibilities to: help prevent workplace injuries occurring; enforce work health and safety laws; provide reasonably priced workplace injury insurance for employers; help injured workers back into the workforce; manage the workers' compensation scheme. Also known as the Regulators.

Worker – includes employees, contractors, subcontractors, outworkers, apprentices and trainees, work experience students, volunteers and PCBUs if they perform work.

Workplace – any place where work is, is to be, or is likely to be, performed by a worker, self-employed person or employer.

Workplace manslaughter laws – laws in each state and territory jurisdiction on work-related fatalities. In many jurisdictions, convictions lead to large fines and potentially jail terms for businesses and individuals.

Quads and motorbikes

Quads and motorbikes

The leading cause of death on farms

Quad bikes are the leading cause of on-farm fatality in Australia with an average of 15 deaths per year. They are also the leading cause of death of children between the ages of 5 and 14 on-farm.

The main causes of death and severe injury are tipping and rollover resulting in crush injury, asphyxia, neck and head injury.

WHS risk associated with use of quads on Australian farms should therefore be assessed as HIGH. As an employer or person conducting a business on the farm, you have a legal responsibility to ensure that everyone who uses quads and/or motorbikes is safe. Use the following resources to ensure you comply with this requirement.

From ABC News **15 July, 2016**

$11.9m in quad bike compensation case

A Tasmanian farmer will have to pay $11.9 million to a British backpacker who was working for him when a quad bike rolled making her a quadriplegic with a catastrophic brain injury.

Holly Raper was a budding photographer and had only been working at the King Island dairy farm for a few weeks before the 2011 crash.

Hobart lawyer Brian Hilliard, who represented the Raper family, said the crash had left the now 27-year-old in a minimally conscious state.

Court told of farmers' negligence

Justice Stephen Estcourt accepted Ms Raper was not properly trained and did not have a helmet.

During the hearings Ms Raper's lawyers also claimed that the quadbike had significant defects, including disconnected rear brakes, excessive steering wear and a rear-wheel had been put on backwards.

Justice Estcourt found the farmers had been negligent and were liable for her injuries.

He did not find any evidence that Ms Raper's actions had contributed to her injuries.

Court costs, likely to run into millions of dollars will also need to be paid. The farmers have since sold their property.

Step-by-step – Setting up for quad and motorbike safety on your farm

1. Getting started

- [ ] **Read this information pack** carefully and watch the relevant videos.
- [ ] Complete the Quads and Motorbikes **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of actions and **set a date** to complete each action in the **Action Plan.**
- [ ] Read the information quickly again.
- [ ] Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).

2. Changing vehicle choice or design

- [ ] Decide if you will **change from using quads** to side-by-sides, motorbikes or other vehicles. Make a plan.
- [ ] Have **Crush Protection Devices** (CPDs) fitted to all quads used on the farm.

3. Setting up your policy, processes and paperwork

- [ ] Set up your **Farm Policy** and **Standard Operating Procedure** for use of quads and motorbikes, using the templates.
- [ ] Include a copy with the documents you use to **induct new staff**.
- [ ] Arrange the **training** needed and who will participate. Set up a record of induction and training, using the template.
- [ ] Review your maintenance of quads and motorbikes and ensure they are safe and you have a record of what was done.
- [ ] Go through the arrangements you now have in place with workers or family at your next **workplace meeting**.

Sleep well – job well done.

Resources in this section

- **Information** about use of quads and motorbikes on dairy farms and your legal obligations.
- **Safety Self-Assessment**.
- **Farm Policy template** for using quads and motorbikes.
- **Standard Operating Procedure** template for using quads.
- **Training and induction record template.**

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety.** You can edit the templates to suit your farm.

Source: WorkSafe Victoria

By law

WHS regulations require you to assess and manage the risks to health and safety associated with quads and motorbikes by:

- identifying reasonably foreseeable hazards that could give rise to the risk of a quad or motorbike accident
- eliminating the need to use quad bikes wherever possible
- if it is not reasonably practicable to eliminate the risk, minimising it by implementing control measures in accordance with the hierarchy of control
- reviewing and revising risk control measures to ensure they are effective
- consulting, so far as is reasonably practicable, with workers who are (or are likely to be) using quads or motorbikes.

By law, you are responsible for all people who operate quads or motorbikes on your farm.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For quads and motorbikes	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Choice of vehicle – is a safer vehicle available?	☐ Never considered	☐ Sometimes considered	☐ Always considered
Quads have Crush Protection Devices (CPDs) fitted (all quads on the farm, even if owned by others)	☐ None	☐ Some	☐ All
Serviced and maintained to manufacturer's recommendations	☐ None	☐ Some	☐ All Quads and Motorbikes
Loads, attachments and modifications are within manufacturer's recommendations	☐ None	☐ Some	☐ All
Loads and attachments are suitable for the operating environments	☐ Only occasionally	☐ Sometimes	☐ Always
Registration and vehicle licences (if used on roads)	☐ Not in place	☐ Some in place	☐ Complete and up-to-date
Standard Operating Procedures (SOPs)	☐ SOPs not set up	☐ SOPs set up, not used by all	☐ SOPs are used by all workers
Operators are trained and competent to use the quad or motorbike for the tasks required	☐ None, or not known	☐ Some	☐ All
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up-to-date
Less experienced operators are supervised	☐ Never	☐ Sometimes	☐ Always
Pre-operational checks are done	☐ Never	☐ Sometimes	☐ Always
Rules: no passengers, no operators under 16 years on quads/No adult-sized motorbikes used by children	☐ Not clear or followed	☐ Usually followed, but not always	☐ Always followed
Helmets complying with Australian Standards	☐ Never worn	☐ Sometimes worn	☐ Always worn by all operators
Rules: 'No go' zones, road use and speed limits	☐ Not clear or followed	☐ Usually followed, but not always	☐ Always followed
Keys removed when not in operation	☐ Never	☐ Sometimes	☐ Always
Reporting damage or malfunction	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Reporting accidents and incidents	☐ No process set up	☐ Sometimes	☐ Process is used by all workers
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on

Quad bikes

When quad bikes first became available, their ability to cross wet paddocks without leaving a boggy trail made them very popular on dairy farms, especially when managing irrigation. Other advantages soon emerged, including making gate opening easier and the ability to carry a variety of tools, tow a small trailer (calf crate) or fit a small spray tank for weed control.

The big drawback of the quad is its high centre of gravity with associated risks of rollover and back flip. Attachments (which often exceed rated carrying and towing capacities) also contribute to instability.

Rollovers, back flips and tipping are most likely on slopes or rough ground, however they can occur on flat ground with small imperfections such as wheel ruts. A recent review in the USA found nearly half the rollovers were on flat ground.

In 2009, the Victorian Coroner's inquest into eight quad fatalities recommended: "Quad bikes must not be described as All Terrain Vehicles or ATVs. So described, a false impression is created, which warnings are unable to erase".

Rollover and backflip injuries and fatalities have been exacerbated with the increase in speed and weight of various makes of quads, some now up to 400kg.

Quad bikes are now the biggest killer on Australian farms. The risk is high.

To decide the best or most practical way to reduce the risk of injury by an identified hazard, use the **'hierarchy of control'** where control measures are, by OHS/WHS laws, ranked from the highest level of protection to the lowest.

1 Eliminate the hazard.
2 Substitute the hazard with a safer option.
3 Engineering and/or isolation.
4 Administrative controls such as safe operation and training.
5 Personal Protective Equipment (PPE).

If the farm continues to use quad bikes, operating them safely will rely on a combination of 3, 4 and 5.

In addition, ensure that operators carry mobile phones or portable UHF when working alone. To prevent child access and unauthorised use, always remove the keys from the quad when it is not in use.

Best practice

6 Consider safer, more stable vehicles (See Farm Safety Manual topic, Farm Vehicles).
7 Fit crush protection devices.
8 Do not carry passengers.
9 Do not allow children under 16 or untrained persons to operate.
10 Provide instruction and training.
11 Ensure load limits are not exceeded.
12 Establish clear 'no go' zones and speed limits.
13 Ensure the quad is maintained.
14 Wear motorcycle helmets, (meeting Australian/New Zealand standards, AS1698) and where required other Personal Protective Equipment such as eye protection, gloves, boots and long trousers.

Learn more

The WorkSafe Victoria interactive risk assessment tool for quad rollovers provides guidance on determining the risk of rollover when using a quad bike.

Factors considered are:

- the ability of the rider to control (e.g. older riders may have reduced strength or agility)
- the tasks to be performed and speed required (e.g. transport only, carrying or towing loads, moving cattle, spraying)
- the terrain (e.g. tracks, slopes, paddocks,mud or sand, loading ramps).

This guide may be used by the regulators to determine the level of compliance in an inspection or incident investigation.

worksafe.vic.gov.au/resources/quad-bikes-reducing-risks

Change to safer vehicles

Not using quad bikes at all is becoming a more acceptable decision for many farm businesses. Injury and death are massive risks to consider. The risk to the farm business through expensive medical costs, emotional strain, lost time, lost expertise and potential prosecution and civil action also need to be taken into account.

Since 2021, the Victorian and NSW governments have provided a financial incentive for farmers to purchase alternative, safer vehicles such as side-by-sides (In other states, check whether your government has initiated a similar scheme).

Is the quad the most appropriate vehicle to do the job?

A farm ute or side-by-side vehicle can carry loads and passengers more safely. Alternatively, a tractor or two-wheel motorbike may be more appropriate, depending on the tasks to be undertaken.

To decide which vehicle is the most appropriate and safest for the task, consider:

- The nature of the task such as getting cows in, spraying, towing and people transfer
- The conditions of operation, including the terrain (rocky, muddy, steep, holey), the amount of and type of vegetation cover, the need for on-road use, speed required, loads and tow limits
- The need to carry passengers, including children
- The age and skill of the operator(s)
- The training and practice required to become a competent operator and any licence requirements
- The supervision and instruction required when operating a particular vehicle on a specific property
- The maintenance required to ensure safe condition, registration and roadworthiness
- The specific rules and safe operating procedures that need to be established and followed including manufacturers recommendations.
- The personal protective equipment to be worn when operating the vehicle.

Decide which vehicle is the most appropriate and safest for the task. For example, for a job requiring two people, always choose the side-by-side.

Source: Dairy Australia

Learn more

Information on the financial subsidies when purchasing safer vehicles in Victoria and NSW.

worksafe.vic.gov.au/farm-machinery

safework.nsw.gov.au/hazards-a-z/quad-bikes-and-side-by-side-vehicles

Crush Protection Devices

Over the years, quad bike development has improved brakes, suspension, transmission and ease of maintenance. However, a rated Crush Protection Device (CPD, also called Operator Protection Device or OPD) has yet to be integrated into the design. From October 2021, OPDs must be fitted on all quads, including retrofitting on older models.

There has been a lot of media surrounding the safety of quads with manufacturers resisting the need for crush protection and shifting the responsibility of accident prevention to the operator. Certainly, safe and competent operation is important, however from the principles of risk management, it is lower down the order than engineering solutions such as CPDs.

The effectiveness of CPDs have been demonstrated in the field:

> "Given there have been more than 10,000 quads fitted with some kind of crush protection device in Australia and New Zealand since 2000, and there is not one single fatal case implicating a crush protection device, we can say with a high degree of confidence that they do not make quads more dangerous."

Prof Tony Lower, University of Sydney

CPDs have been accepted by safety regulators as a suitable engineering solution to reduce the risk of injury and fatality associated with being pinned underneath a quad bike. The CPD is not a guarantee against injury, but will give the operator the space to crawl out from underneath an overturned quad.

Since 2021, NSW and Victorian WorkSafe authorities have provided a financial rebate for purchase and fitting of a CPD manufactured in accordance with approved engineering standards and independently tested. There are currently at least two devices that meet these criteria - the Quadbar™ and the ATV Lifeguard.

Remember that all quads on the farm must comply with your Farm Policy. If workers or sharefarmers have their own quads, ensure they have CPDs too.

Quadbar fitted to a quad.
Source: ***quadbar.com.au***

Learn more

Quad rolls and back-flipping with and without CPD.

youtube.com/watch?v=fbHunv6NNxI

Information on the financial subsidies for fitting CPDs in NSW and Victoria.

nswfarmers.org.au/QuadBikeRebate/Home/QuadBikeRebate/Default.aspx?hkey=426ab2dd-f8a8-4d0d-94a1-ca5f0e0e8f3c

vff.org.au/quadbike

Check with your state authority about quad bike safety incentives in your state.

From Stock and Land 1 June, 2016

Quad bike rollover highlights safety issues

Tom Mckenny

When north eastern Victorian cattle farmer Scott McKay came a cropper from his quad bike, it was a combination of good luck and good management that saw him miss becoming a statistic on what is one of farming's most dangerous tools.

The accident happened on a flat section of road when a calf blocked his path, causing him to grab the brake but roll the bike. He believes a crush protection device prevented the quad bike from rolling onto him and potentially causing serious damage. That risk was evident when two men couldn't right the rolled bike.

He is confident the Lifeguard crush protection device stopped the bike rolling further.

The Lifeguards were fitted to the farm's two 500cc quads 12 months before the accident.

"It's about looking after your people and looking after yourself," Mr McKay said.

Farmer Scott McKay said the Lifeguard Crush Protection Device fitted to his quad helped minimise injury in an accident. Source: Stock and Land

"The accident was slow motion and I didn't hurt myself and there was no damage to the bike, but it was 20 minutes before someone came along. If you had that lying on your chest I don't know whether you'd still be breathing."

He says the argument about fitting crush protection to quads is analogous to the tractor Roll Over Protection Systems argument decades ago.

"It's the same sort of argument with people saying the same sorts of things. Now you wouldn't hop on a tractor if it didn't have a ROPS."

Training

There is a common misconception that quads can be ridden by anyone, with or without experience. This is not true. Riding a quad safely requires specific skills. The high centre of gravity of quads means they are quite unstable when cornering or going up and down slopes. To compensate for this, manufacturers recommend driver active operation where the operator shifts their weight to maintain stability.

Formal training, with assessment of competency to ride a quad, is available at many external training organisations as part of acquiring a qualification or developing a skill set.

Informal training conducted on farm can also build these skills:.

- Working through the SOP for quad use on the farm is a good way to cover the on-farm training needed.
- It is also important to provide an induction to the particular machine to be used, and instruction in how to complete the particular task which will be done with the quad. For example, a worker who is going to use the quad to collect calves should be able to ride the quad safely in the paddock and be given specific instruction on attaching the calf trailer, the maximum number of calves to load, and the no-go zones within particular paddocks.
- Supervise operators until you are sure they are capable of undertaking the quad task safely.

Keep a record of all training and induction for each worker using the template provided with this topic.

Learn more

Check with your Regional Development Program (RDP) about whether training in using quad bikes is available in your region.

A simple run-through of quad bike pre-operational checks is available at:

worksafe.vic.gov.au/quad-bike-safety-app

Maintenance

Always follow the manufacturer's recommendations for service and maintenance.

These are specified in the User's Manual.

Tip

Avoid using quads on roads wherever possible:

- Road use requires registration and vehicle car licence (check details by state).
- Low pressure quad tyres are very grippy on hard surfaces so avoid turning sharply.
- The locked differentials on quads mean that handling is unpredictable on hard surfaces even at low speeds, so travel very carefully and avoid exceeding 40km/hr.
- Ensure indicators and lights are working.
- Consider using a rotating safety beacon.
- Wear high-visibility (hi-vis) clothing.

Helmets

All helmets used must be motorcycle helmets meeting Australian/New Zealand Standard AS/NZS 1698:2006 Protective Helmets for Vehicle Users.

Various styles are available including full helmets or 'chopped top' ('shorty') designs that do not cover the ears. Pull down eye protection is available with some. The different designs allow users to pick features (ventilation, ear coverage, weight and colour) that suit them. Buy a helmet for each worker that suits them best, to 'dismantle the excuses' for not wearing it.

Having a helmet is no use if it is not worn. Wearing it is of little use if the straps are not fastened.

Examples of 'Shorty' (left) and double visor (right) helmets that meet the Australian Standard.

If it doesn't have this label, it isn't approved.
Source: Dairy Australia

Tip

If you are using spray tanks on quads:

- Ensure there are baffles in the tanks to minimise load shifting that affects stability.
- Avoid 'wrap around' tanks because they impede body movement of the operator when trying to prevent tipping.
- Ensure the combined weight of tank(s) and contents do not exceed the recommended load limits.
- Wear the PPE as specified in the SDS for each chemical used (this may make using the quad a less appealing option for the task).
- Clean tanks and bikes after spraying and lock wands so they can't be activated when not attended.

If you are using a trailer:

- Ensure you do not exceed manufacturer's recommendations for weight (trailer and contents) and speed for the terrain covered.

Check load limits on labels or User's Manual.
Source: Dairy Australia

Two-wheeler motorbikes

Two-wheeled motorbikes are a common cause of injuries on farms especially when used at speed. 'No go' zones and speed limits should be clearly set out. Children are particularly at risk and must only use bikes appropriate for their size.

Motorbikes require active riding. Stability can be impacted by carrying loads and passengers (avoid carrying loads on knees). To keep balance and control requires concentration, especially in rough terrain. Multi-tasking may require a safer vehicle.

Look out for obstacles on the ground or suspended including wires, tapes and irrigation pipes. Terrain can change after adverse weather conditions, including hidden holes and branches.

When crossing or travelling on roads ensure working indicators and lights, rear view mirror and consider hi vis clothing. Road use requires registration and a motorcycle licence.

Best practice

1 Ensure the type, size and capacity of the motorbike is matched to the terrain, task and operator (including children).

2 Ensure the bike is maintained.

3 Fit chain and exhaust guards.

4 Train operators in safe use of motorbikes, including the tasks to be performed.

5 Provide induction to workers on the specific model of motorbike used on the farm, including pre-operational checks, access to operator's manual and established rules.

6 Use motorcycle helmets (with straps fastened) and safety boots. Depending on operating conditions, gloves and eye protection may also be needed.

Tip

The guide to choosing the right size motorbike for children:

- Can the child lift the bike from the ground unassisted?
- Can the child reach the ground with their feet when astride the bike?

Source: Dairy Australia

Pre-operational checks

Before starting the bike, use the TCLOC approach to check the following:

T = Tyres and wheels
Tyre pressure: Check and ensure tyre pressure is maintained to the manufacturer's specifications.

C = Cables, controls and chains
Brakes: mud and manure is hard on brakes, check their function regularly. Chains are tensioned and guarded correctly.

L = Lights, electricals and mirrors

O = Oils and fluids

C = Chassis and suspension
Foot decks: are prone to damage from sticks. Check regularly and replace if damaged

Make sure that you have an easy system for workers to report damage or malfunction, such as a designated corner of the dairy whiteboard, or tagout so the motorbike is repaired before the next use.

Farm Policy on Safe Use of Quad Bikes

Farm	
Purpose	This policy is in place to ensure quads operated on our farm are without risk to operators and others
Who does it apply to?	Trained managers, contractors and workers. Children and/or visitors are prohibited as riders or passengers on quads.
Consequences of not complying with this policy	Failure to follow the processes outlined in this policy may lead to disciplinary action, dismissal or termination of contract. If any circumstance arises that would make it difficult to comply with this policy, immediately contact:
Policy was last reviewed	**Date:**

Quad bikes are the leading cause of on-farm fatality in Australia, and the leading cause of death of children between the ages of five and 14 years on-farm. The main causes of death and severe injury are tipping and rollover resulting in crush injury and asphyxia, neck and head injury.

To reduce the risk of injury when operating quads on this farm, the following has been established:

- Only authorised tasks involve the use of quads.
- Only authorised persons are permitted to operate quads.
- All authorised operators are to be trained, inducted and competent in the quad to be used. (Supervision will be provided for those gaining competency).
- Established Safe Operating Procedures (SOPs) must be followed.
- All quads on this farm are fitted with Crush Protection Devices (CPDs).
- 'No go' zones and speed limits have been established.
- Start-up checks and maintenance schedules are to be conducted.
- Helmets are provided and must be worn with the straps done up (additional PPE such as eye protection, gloves and safety boots will be worn when required.)
- All attachments and loads are to be within the recommended limits relevant to operating conditions.

We are absolutely committed to reducing the risk of injury associated with the use of quads on this farm and the following rules apply to all users.

1 **No passengers are to be carried on quads.**

2 **No children under the age of 16 are to be authorised to operate quads.**

3 **Road use is limited to registered bikes and current vehicle licence holders.**

4 **Keys are to be removed from the quad when not in use.**

5 **Damage or malfunction is to be reported immediately to** _____ _____ **and recorded** _____**, and if not safe to use, tagged out.**

6 **When working alone report your whereabouts on** _____ **and carry a mobile phone/mobile UHF.**

7 **Quads, like all equipment on this farm, are not to be operated by anyone under the influence of alcohol or other drugs.**

8 **The performance of stunts, jumps, wheelies and speed outside of limits is not permitted.**

This applies to any quad bike used on this farm, including those owned by workers, contractors or share farmers.

Staff member/contractor acknowledgement

I have received a copy of this policy and have read, understood and agree to comply with it.

Name:

Signature: Date:

Remarks or comments:

*** File this document in the relevant farm folder and retain for a minimum of two years. ****

Standard Operating Procedure (SOP)

Using quad bikes – example

Job steps	Photographs	Safety/Quality/Environment
1 Check the vehicle and operator are right for the task. a. Choose a safer vehicle (e.g. ute or side-by-side) if available and suitable for the task. b. DO NOT USE the quad bike if you are not authorised to operate it. c. Do not use it in excessively poor conditions (weather, visibility or surfaces).		**Safety** – Only trained and competent riders (for task and terrain) should be authorised to use quad bikes. Quad bikes should NOT be used by people younger than 16 years or visitors. Quad bikes used on-road, even for short periods, must be registered and on-road operators must hold a current valid car licence (learner's permits are not sufficient). Towing is not allowed when operated on or adjacent to a road.
2 Personal Protective Equipment (PPE) a. DO NOT RIDE WITHOUT AN APPROVED HELMET WITH STRAPS DONE UP. b. Wear suitable clothing, including sturdy boots. c. Consider wearing high visibility clothing if working remotely, or near/on a road.		**Safety** – Helmets must be AS 1698 approved.
3 Communication a. Have appropriate communication (i.e. mobile phone or emergency alert) available. b. Always tell someone where you are going and estimated time of return. Agree on response if you don't turn up. c. Advise your supervisor of any mechanical problems and do not ride a quad bike that is not in good repair.		**Safety** – When working alone or remotely, a 'man-down' device is worth considering. These devices automatically alert nominated contacts or emergency services via phone networks if the wearer falls or is stationary for a period of time. If working outside mobile range, consider an emergency beacon. It must be clear who needs to be informed, and when to come after you if you have not returned as scheduled.
4 Pre-operational checks a. Follow manufacturer's recommendations and warning labels. b. Locate and ensure you are familiar with all controls and warnings. c. Use the TCLOCR ('teeclocker') approach to doing regular checks: **T = Tyres and wheels** – Tyre pressure: Check pressures when cold before riding. Use the low pressure gauge available from manufacturers. Tyre tread: Check treads are adequate for task and terrain. **C = Cables and Controls** - Brakes: mud and manure are hard on brakes, check their function regularly **L = Lights and Electrical** **O = Oils and Fluids** **C = Chassis and suspension:** Foot decks are prone to damage from sticks. Check regularly and replace if damaged **R = Rollover/crush protection device:** Ensure that it is in operational condition and has not come loose.		**Safety** – The low tyre pressure on quads (less than 8PSI) is important for stability and predictable handling. Having adequate tread typically means replacing tyres well before they are worn out. The front pair and rear pair of tyres must have approximately equal tread for stability and predictable handling.

Using quad bikes – example continued

Job steps	Photographs	Safety/Quality/Environment
5 Operational safety a. DO NOT CARRY PASSENGERS. b. Do not carry any load that is not suitable and secured and within the rated limit. Keep loads low. c. If towing, do not exceed recommended weight (for trailer and contents). d. Choose the safest route. e. Observe speed limits and no-go areas. f. Ride at speeds appropriate to the terrain and generally not more than 20 km/hr. g. Travel up/down slopes rather than across. Take extra care on slopes and riding over uneven ground. h. Ensure no person or animal is endangered when operating equipment i. When refuelling, do not smoke and avoid all other ignition sources. Avoid spilling fuel onto hot motor or exhaust. j. Advise your supervisor of any mechanical problems and do not ride a quad bike that is not in good repair.	 	Safety – Rated limits for pack rack loads are often relatively small, typically around 25–30kg. Even at these loads the stability is compromised and the quad bike needs to be driven accordingly. Note: 20 km/hr can be too fast on unknown or uneven surfaces and sloping ground.
6 Ending operations a. Park on even ground. b. Lock the parking brake. c. Stop the engine and remove the keys.		Safety – Removing the keys is very important to prevent children or inexperienced riders using the quad bike.
7 After use a. Remove any foreign material from in and around engine parts. b. Hose off mud that has caked onto surfaces. c. Check for damage and if found report it immediately. d. Store helmets in practical clean location ready for next use. e. Place keys in a secure location.		

Standard Operating Procedure (SOP)

Motorbike (two-wheel) start up and riding safely – example

Motorbikes are used for moving stock and general movement around the farm. As a rule, motorbikes stay within the farm boundaries.

Job steps	Photographs	Safety/Quality/Environment
1 Pre-start check of two wheel motorbike a. Check the cables for kinks or broken strands. Lubricate the cables. b. Make sure your tyres are in good condition:. - air pressure - worn or uneven tread -cuts, nails stuck in the tread and cracks in the sidewalls. c. Check all light bulbs are working and the lenses are clean. d. Check the drive chain or belt for lubrication, wear and adjustment. e. Check oil either through the site glass (photo) or dip stick depending on bike being used f. Check there is enough fuel for the task.		**Safety** – Incorrect air pressure – the bike won't handle properly if the air pressure is too low or too high. This affects braking and steering. Incorrect tyre pressure contributes to bike crashes. Tyres in poor condition affect the bike's handling and make it harder to control on slippery or uneven surfaces. A tyre blowout is extremely dangerous potentially causing a crash and injuries. Remove any build-up of mud, dust and debris prior to checking to make it easier to identify potential problems. **Environment** - Familiarise yourself with the owner's manual before use of the motorbike.
2 After you've started the bike, check the following: a. Try the front and rear brakes one at a time. Make sure each brake, when applied, holds the bike. b. Make sure clutch and throttle controls work smoothly. c. Make sure you can operate hand and foot controls when you sit comfortably on the bike. d. Ensure helmet is strapped on before riding.		**Safety** – PPE - Helmet which meets Australian Standard AS-1698 and clipped on firmly, sturdy boots with tread. Abrasion resistant clothing to suit weather conditions, i.e weather-proof jacket for wet or cold conditions. If you have any concerns that the bike components are not functioning correctly, do not ride the bike. Report the faults to senior management and document in the diary in the dairy office.

Induction and training record

Employee's name:			
Supervisor's name:			
Quad details:			
Make:	Model:	Engine capacity:	cc

	Yes	No
Does the employee have access to a copy of the manufacturers handbook or user guide?	☐	☐

Has the employee received instruction in the following areas?

Features and controls of the quad bike	Yes	No
Steering	☐	☐
Brakes	☐	☐
Lights	☐	☐
Towing and carrying capacity. _____ kg Front rack _____ kg Rear rack _____ kg Towing	☐	☐
Starting and shutdown procedures	☐	☐

Maintenance requirements of the quad bike	Yes	No
Tyres and wheels. Pressures _____ psi front _____ psi rear	☐	☐
Cables and controls	☐	☐
Lights, electrical and switches	☐	☐
Oils, fuel and fluid	☐	☐
Chassis and suspension	☐	☐
Cleaning	☐	☐
Fault reporting	☐	☐

Safe and appropriate operation	Yes	No
Helmets and other protective equipment	☐	☐
No-go and environmentally sensitive areas	☐	☐
Speed limits	☐	☐
Uneven and unpredictable terrain	☐	☐
On road use – gravel and sealed surfaces	☐	☐
Active riding techniques	☐	☐
Use of attachments (for quads)	☐	☐
Around potential hazards (e.g. children, visitors, tapes across tracks, blind corners, concealed objects)	☐	☐
For animal welfare	☐	☐

Has the employee been observed operating the quad bike in a safe and controlled manner, under work conditions?		Yes	No
Initial observation	Date:	☐	☐
After 1 week	Date:	☐	☐

I am satisfied that the employee _____

has demonstrated proficiency in the safe use of a quad bike, to the standards required by our farm.

Supervisor signature: **Date:**

I understand and agree to comply with all the quad bike standards required.

Employee signature: **Date:**

Farm records

Farm records

Farm vehicles

Farm vehicles

Side-by-sides, utes, 4x4s, cars and trucks

In addition to quads and motorbikes, farm vehicles such as side-by-side vehicles, cars, utes and trucks are major causes of death and serious injury to workers and family members including children on Australian farms. Operators, passengers and bystanders of all ages are at risk.

Most fatalities and serious injuries associated with farm vehicles involve collisions, rollover with ejection due to operators and passengers not wearing seat belts or from riding in the tray, and run overs.

Importantly, a key observation from the fatality data is that the fatalities approximately follow rates of exposure – meaning that age and experience do not by themselves ensure a safe outcome. (Source: Lower et al; 2017)

Young children under five are at most risk of run over as pedestrians or of falling from vehicles.

Seasonal long working hours is a risk to farm workers, both on the farm and travelling on roads to and from farms. Loss of concentration due to fatigue of operators increases the risk of vehicle incidents.

As an employer or person conducting a business on the farm, you have a legal responsibility to ensure that everyone is safe in and around vehicles. Use these resources to ensure that you comply with this requirement.

By Andrew Thomson **28 October, 2015**

Man killed on dairy farm

A PRINCETOWN farmer has died while trying to jumpstart a ride-on lawn mower.

Port Campbell police Senior Constable Scott Thompson said the 45-year old farmer was using a ute to jump-start the mower about 3.30pm on Monday.

He said the farmer had leaned into the ute to start it.

The ute was in gear at the time and the vehicle jumped forward, pinning the man between the ute door and a pole in the shed, he said.

Senior Constable Thompson said there were no suspicious circumstances.

An ambulance was called but the man could not be revived.

Police attended and will investigate the incident.

A report will be prepared for the Victorian Coroner.

WorkSafe spokesman Peter Flaherty said the authority was aware of the incident and was investigating.

Step-by-step – Setting up for vehicle safety on your farm

Getting started

- [ ] **Read through this information pack carefully.**
- [ ] Complete the vehicles **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of actions and **set a date** to have each action completed in the **Action Plan.**
- [ ] Set up your **Standard Operating Procedure** for use of vehicles.
- [ ] Put a copy with the documents you use to **induct new staff**.
- [ ] Review your **maintenance of vehicles** and ensure you have a record of what is done.
- [ ] Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).

WHS regulations require you to assess and manage the risks to health and safety associated with vehicles, for example:

- Identify reasonably foreseeable **hazards** that could give rise to the risk of a vehicle accident.
- **Eliminate the risk** wherever possible.
- If it is not reasonably practicable to eliminate the risk, minimise risk by implementing control measures in accordance with the hierarchy of control.
- **Review** and revise risk control measures to ensure they are effective.
- **Consult**, so far as is reasonably practicable, with workers who are (or are likely to be) using vehicles.

By law, you are responsible for all people who operate vehicles or are passengers or bystanders on your farm.

Resources in this section

- **Information** about safe use of vehicles on dairy farms and your legal obligations.
- **Safety Self-Assessment.**
- **Standard Operating Procedure** template.

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety** You can edit the templates to suit your farm.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For utes, side-by-sides (with ROPS fitted), trucks, cars, 4WDs	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Choice of vehicle – is a safer vehicle available?	☐ Never considered	☐ Sometimes considered	☐ Always considered
Serviced and maintained to manufacturer's recommendations	☐ None	☐ Some	☐ All vehicles
Loads, attachments and modifications are within manufacturer's recommendations	☐ None	☐ Some	☐ All
Loads and attachments are suitable for the operating environments	☐ Only occasionally	☐ Sometimes	☐ Always
Registration and vehicle licences (if used on roads)	☐ Not in place	☐ Some in place	☐ Complete and up-to-date
Operators are trained and competent to use the vehicle for the tasks required	☐ None, or not known	☐ Some	☐ All
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up-to-date
Less experienced/learner operators are supervised	☐ Never	☐ Sometimes	☐ Always
Standard Operating Procedures (SOPs)	☐ SOPs not set up	☐ SOPs set up, not used by all	☐ SOP is used by all workers
Pre-operational checks are done	☐ Never	☐ Sometimes	☐ Always followed
Rules: no riding on trays or trailers/seat belts for all operators and passengers/ child restraints for under 7-year-olds	☐ Not clear or followed	☐ Usually followed, but not always	☐ Always followed
Rules: 'No go' zones, road use and speed limits	☐ Not clear or followed	☐ Usually followed, but not always	☐ Always followed
Keys removed when not in operation	☐ Never	☐ Sometimes	☐ Always
Reporting damage or malfunction	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Reporting accidents and incidents	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on

Side-by-sides, utes, 4x4s, cars and trucks

Choosing the safest vehicle to do the job

Farm vehicles such as utes, side-by-side vehicles, tractors and two-wheel motorbikes all have different features. To decide which vehicle is the most appropriate and safest for the task, consider:

- portion of the task that is required to be on public roads and distances/time involved, including ensuring minimum safety standards such as air bags and preferably, ESC (electronic stability control)
- nature of the task, such as getting cows in, spraying, towing and people transfer
- conditions of operation, including the terrain (rocky, muddy, steep, holey), the amount of and type of vegetation cover, the need for on-road use, speed required, loads and tow limits
- need to carry passengers, including children
- safety features of the vehicle such as rollover protection, crush protection and operator and passenger restraint
- stability of the vehicle when carrying loads and/or towing
- age and skill of the operator
- training and practice required to become a competent operator and any licence requirements
- supervision and instruction required when operating a particular vehicle on a specific property
- maintenance required to ensure safe condition, registration and roadworthiness
- specific rules and safe operating procedures that need to be established and followed, including manufacturer's recommendations
- personal protective equipment to be worn when operating the vehicle.

In some circumstances, a tractor, front- end loader or other mobile plant, may be more suitable for the task.

Consideration could also be given to using a contractor who may be better equipped and skilled to undertake a particular task for which a task-specific vehicle exists.

Side-by-side vehicle with integrated ROPS. Source: Dairy Australia

Side-by-side vehicles

Side-by-side) vehicles are designed for off-road use and have some similarities with quads in that they have low pressure, high flotation tyres designed to have reduced impact on wet ground. Unlike quads, most side-by-sides have an approved integrated Roll Over Protective Structure (ROPS) fitted. They have a wider wheel base, are more stable than quads and designed to carry passengers on bench or bucket seats. Operation of side-by-sides is by steering wheel rather than handlebar and a load carrying tilt tray is usually fitted.

Side-by-sides are less stable than road going vehicles and more than capable of a rollover. To prevent ejection, seat belts are fitted and must be used at all times. Most manufacturers also recommend the use of helmets and this should be considered as a risk control.

Some models have side doors; where they exist, they must be used. Other operational and safety advantages include two types of keys that enable speed limiting by engine governing, and increased carrying and towing capacity.

Tip

ROPS on side-by-side vehicles

- Check to see if ROPS has a compliance plate indicating it meets an international or Australian standard.
- If your side-by-side does not have a ROPS, fit one or replace the vehicle.

Best practice

1. Choose the vehicle best suited to the task.
2. Never carry passengers or children on trays of vehicles and trucks or on trailers.
3. Ensure operators and all passengers always wear seat belts, including in paddocks and on short back road trips.
4. Use rated and approved child restraints or booster seats for children up to seven years.
5. Establish a traffic management plan to separate pedestrians from traffic and enforce speed limits.
6. Maintain all vehicles as per manufacturer's recommendations and keep records.
7. Ensure vehicle roadworthiness for on-road use.
8. If vehicles are used interchangeably between farm tracks and on-road, systems should be established to ensure they are in a clean and roadworthy condition after farm use. This may involve setting up a dedicated hose and brush to wash off excess mud, particularly over lighting zand other safety features.
9. Maintain reverse beepers, mirrors, cameras and rotating beacons.
10. Ensure operators are trained and competent for each vehicle and licensed where required.
11. Establish and undertake pre-operational checks.
12. Establish and enforce rules of operation e.g.
    - wearing helmets when operating side-by-side vehicles (if recommended by manufacturers)
    - not starting the vehicle if not seated
    - not getting out of a moving vehicle (especially as the operator)
    - applying the handbrake when leaving vehicle
    - removing keys when not in use to prevent unauthorised use, including by children.
13. Ensure modifications are within manufacturer's recommendations and undertaken by a competent, and in some circumstances, qualified person.
14. Consider disposing of or disabling vehicles unable to be maintained in a safe working condition.

Traffic and bystanders

Trucks, large 4-wheel drives (4WD) and heavy machinery are common around the farm and often used where pedestrians and children may be present. These working vehicles require the operator to concentrate on their task, as with many blind spots and direction changes, operators are not always able to see bystanders, especially small children.

A traffic plan involves laying out maps of the farm and planning routes and rules for a safe outcome.

Ways to control these risks with sound traffic management include:

- separate traffic and pedestrians wherever possible
- design tracks and infrastructure so that trucks and tankers do not need to reverse
- set and enforce speed limits for the farm and around houses and buildings
- establish safe play areas for small children.

Also provide signage of speed limits, entrances for trucks, warning of presence of children, directing visitors and pedestrians.

Tip

Making reversing safer for those around:

- Reverse beeper globes can be fitted to the reverse globe socket of cars including 4WD wagons.
- Reverse cameras can also be retrofitted to the rear of vehicles.

Tip

If it is necessary to travel on the tray (for example, when firefighting):

- choose the most appropriate vehicle with safe access and hand rails and ensure a safe operation is established and followed by all.

Always wear seatbelts when operating farm vehicles.

Source: Dairy Australia

Standard Operating Procedure (SOP)

Using side-by-side vehicles – example

This SOP is to be followed whenever you are using a side-by-side vehicle.

Job steps	Photographs	Safety/Quality/Environment
1 DO NOT use this equipment unless you have been instructed in its safe use and operation and have been given permission.		
2 Personal Protective Equipment (PPE) a. Wear suitable clothing, including long trousers and boots. b. Wear hearing protection. c. Wear an approved helmet as required.		Safety – Wearing suitable clothing and appropriate PPE is mandatory for all farm team members.
3 Pre-operational safety checks: a. Read, understand and comply with the manufacturer's operational manual and warning labels. b. Locate and ensure you are familiar with all machine operations and controls. c. Ensure all guards are fitted, secure and functional. Do not operate if guards are missing or faulty. d. Ensure the seatbelt, roll over protective structure (ROPS), falling objects protective structure (FOPS) (where fitted) and guards are in sound condition. e. Use only implements that are suited to the task and are in good condition and safe to use. f. Any lifting or loading equipment must be rated and fit for purpose. g. Before starting a side-by-side, ensure all levers are in their neutral positions, the parking brake is engaged. h. Ensure operators are trained and competent to use it safely in all areas on the farm. i. If the vehicle is used on public roads, ensure operators are appropriately licensed, all lights and warning devices are functioning, visible (clean mud and debris away regularly) and the vehicle is registered.		Safety – **Remote work**. Always tell someone where you are going and estimated time of return. Always have a means of communication in case an incident occurs.

Using side-by-side vehicles – example

This SOP is to be followed whenever you are using a side-by-side vehicle.

Job steps	Photographs	Safety/Quality/Environment
4 Operational safety a. Do not carry any load that is not suitable and secured. b. Only carry passengers if there is a dedicated seat with a seat belt. c. If towing, do not exceed recommended tow ratings (for trailer and contents). Pull only from the factory supplied tow point. d. Observe speed limits and no-go areas. e. Drive at a slow enough speed to keep control over unexpected hazards; adjust speed over varying terrain accordingly. Ensure no person or animal is endangered when operating equipment. Advise your supervisor of any mechanical problems and do not use a side-by-side that is not in good repair.		**Safety** – Do not use faulty equipment. Report suspect machinery immediately. Do not carry anyone other than the driver and one passenger. Never start or operate levers from anywhere other than the seat. Do not dismount while the engine is running unless the side-by-side has completely stopped, the transmission is in park position and the parking brake is fully engaged.
5 Ending operations a. Park on even ground. b. Lock the parking brake. c. Stop the engine and remove the keys		
6 After use a. Remove any foreign material from in and around engine and implement parts. b. Check for damage and report if found.		

Farm records

Farm records

Tractors and mobile plant

Tractors and mobile plant

Tractors and their attachments are an essential part of dairy farming and one of the major causes of fatalities and serious injury to all who live and work on farms.

Fatal incident statistics show operators, passengers, bystanders and children are all at risk from tractors and mobile plant.

While skill and experience are important, incidents can still occur. This shows the need for careful planning of tasks, choosing the right equipment and ensuring regular maintenance and replacement of machinery as required.

Legal obligations under workplace safety laws

As an employer or person conducting a business on the farm you have a legal responsibility to ensure that everyone is safe on and around tractors and mobile plant. Use these resources to help prevent injury and to help to comply with this requirement.

By Riahn Smith, The Weekly Times **May 20, 2016**

Man killed on Echuca farm

UPDATE: A MAN has been killed in a suspected farming accident in Echuca this morning.

Emergency crews were called to a lot-feeding property on Stratton Rd about 9am after it was reported a man had been caught in a power take-off.

Echuca police Sergeant John Trebilcock said paramedics attended the scene but were unable to revive the 61-year-old.

It is believed the man crawled beneath the feeder with the PTO operating and was pulled into the PTO causing his fatal injuries.

A farm hand located the deceased about 9am, turned off the machinery and called emergency services.

Victoria Police and WorkSafe Victoria are investigating and will prepare a report for the coroner.

Step-by-step – Setting up for safety on your farm tractors, their attachments and mobile plant

Getting started

- [ ] **Read through this information pack carefully.**
- [ ] Complete the vehicles **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of things to do and **set a date** to have each thing completed in the **Action Plan.**
- [ ] Set up your **Standard Operating Procedure** for use of tractors and each type of mobile plant relevant on your farm (use the templates available with your Farm Safety Manual, and available on The People in Dairy website).
- [ ] Put a copy with the documents you use to **induct new staff**.
- [ ] Review your **maintenance of tractors and mobile plant** and ensure you have a ongoing records of what is done.
- [ ] Pick a topic to discuss with staff or family at your next **workplace meeting** (you should regularly meet and have at least one safety topic each meeting).

Resources in this section

- **Information** about safe use of tractors and mobile plant on dairy farms and your legal obligations.
- **Safety Self-Assessment.**
- **Standard Operating Procedure** templates.

Information and templates provided in this folder are also available for free download at **thepeopleindairy.org.au/farm-safety**

You can edit and add to the provided templates to suit your farm and its equipment.

By law

WHS regulations require you to assess and manage the risks to health and safety associated with use of any plant. You must:

- identify hazards that could reasonably foreseeably give rise to the risk of a tractor or mobile plant accident
- eliminate risks so far as is reasonably practicable
- if it is not reasonably practicable to eliminate the risk, minimise risks it by implementing control measures in accordance with the hierarchy of control
- consult with workers, so far as is reasonably practicable, who are (or are likely to be) using tractors, their attachments or mobile plant.

By law, you are responsible for all people who operate vehicles or are passengers or bystanders on your farm.

The regulations require that risk control measures must be maintained so that they continue to protect workers and other people from the hazards associated with plant. The control measures must be:

- suitable for the nature and duration of the work
- installed, set up and used correctly
- If training and competence is used as a control measure, then records must be kept showing evidence of induction, training, supervision and any relevant rules and instructions.

The regulations require that a person with management or control of plant at a workplace must:

- so far as is reasonably practicable, prevent unauthorised alterations to or interference with the plant that might affect safe operation
- take all reasonable steps to ensure the plant is only used within its capacity and for the purpose for which it is designed
- ensure all safety features, warning devices, guarding, operational controls, emergency stops are used in accordance with instructions and information provided.

Tractors of all sizes and ages are to be found on most dairy farms. As farms have become larger and handling of bulk materials has become necessary, specialist mobile machinery has become more common. This type of plant includes, for example, industrial front-end loaders and telehandlers.

A variety of attachments to tractors come with their own risks, particularly those driven through the power take-off (PTO). Attachments that pose significant risk include front- end loaders (FELs), post-hole diggers, post drivers, slashers, mowers, silage and hay feed-out wagons and carts.

Incidents that can cause serious injuries or death with tractors and mobile plant include:

- rollovers (whole vehicle rolling over)
- run overs (e.g. wheel of vehicle running over a person),
- falling objects (e.g. load falling off front -end loader onto operator or bystanders)
- exposure to moving parts
- injury while undertaking maintenance
- contact with overhead or underground powerlines
- collision and traffic movements
- pedestrian impact, especially children run over.

The possibility of fire is another hazard when using tractors or mobile plant in summer. Observe fire danger restrictions. Avoid operation in or leaving tractors in long grass and crops and monitor hot parts such as bearings, moving parts and exhausts, especially for grass or straw build up. The exhaust should have a spark arrestor. A fully charged extinguisher should be carried at all times.

Operator health can be affected when using tractors and machinery. Potential exposure hazards must be managed, which include:

- noise
- dusts
- sunlight UV exposure
- extreme weather including cold
- hazardous substances
- hydraulic components - oil, heat, pressurized fluid
- ergonomic hazards associated with poor posture
- vibration
- fatigue, which can be exacerbated by vibration, working in poor light for extended periods of time, and other factors.

WHS regulations require you to assess and manage the risks to health and safety associated with use of any plant. You must:

For mobile plant, regulations require:

- If there is a possibility of the plant colliding with pedestrians or other powered mobile plant, the plant must have a warning device.
- Risks to be managed include those associated with the plant overturning; things falling on the operator of the plant; the operator being ejected from the plant; the plant colliding with any person or thing and mechanical failure of pressurised elements of plant that may release fluids that pose a risk to health and safety.
- No person other than the operator rides on the plant unless the person is provided with a level of protection that is equivalent to that provided to the operator.

By law, you are responsible for all the people who operate tractors or mobile plant or are bystanders on your farm.

The environment in which tractors and other vehicles operate on a farm is critical for safety, which includes managing traffic, blind spots, roads and tracks, gateways, and other thoroughfares so that they are as safe as practicable.

Regions of the farm on which it is too dangerous to have safe tractor or mobile plant access should be managed as 'no-go-zones' to reduce the probability of incident. This includes:

- rocky areas
- boggy or slippery, such as near natural springs or waterways
- sloped areas
- high traffic or pedestrian access areas
- adjacent to building access points or blind spots.

For all tractors and mobile plant, it is important to ensure operators are competent. Training may include an independent formal training course or on-farm instruction on the particular machinery. An induction to the hazards of the tractor, its' attachments and the work environment should be undertaken for new users.

The induction can be based around the safe operating procedure of the machinery and an outline of the farm rules associated with its use. Supervision should be provided for new and learning operators. Tractors are designed for adults and children should not be allowed to operate tractors and heavy machinery.

Working remotely

When working alone or remotely, injuries resulting from an incident could become more serious, or even fatal, if help is not provided promptly. Having good communication and emergency response systems in place becomes critical.

This means ensuring all workers have mobile phone or UHF access, systems in place letting others know where you are working, maintaining regular call -ins, and everyone understanding an emergency response plan.

Trained first aiders and access to up-to-date and relevant first aid kits should also be part of the plan.

Controlling access

It is important to ensure there is never unauthorised use of tractors, including access by children, contractors, visitors and untrained workers.

Remove keys when not in use and store in a lockable key cupboard. The tractor must never be used if the operator is under the influence of alcohol or drugs, including certain prescription drugs.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For tractors	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
ROPS fitted and Falling Objects Protection Structures (FOPS) if using Front End Loaders	☐ Not all tractors have ROPS	☐ ROPS present, not all have FOPS	☐ All tractors have ROPS and FOPS
Seat belts fitted and in good condition	☐ Not checked or not present	☐ Some but not all adequate	☐ All in good condition
Belts, pulleys and moving parts like PTO shafts are guarded and in good condition	☐ Not checked or addressed	☐ Some but not all adequate	☐ All guarded and in good condition
Tyres, rims and exhaust systems in good condition	☐ Not checked or addressed	☐ Some but not all adequate	☐ All in good condition
Seats are ergonomically designed for prolonged use and adjustable	☐ None	☐ Some	☐ All
Cabins in good condition and sealed for noise and chemical application	☐ Not checked or addressed	☐ Some but not all adequate	☐ All in good condition
Cabin access in good condition	☐ None	☐ Some	☐ All
Tractors serviced and maintained to manufacturer's recommendations	☐ Not done	☐ Some service to recommendations	☐ All service to recommendations
Records of maintenance	☐ Not kept	☐ Some	☐ Complete and up-to-date
Chocks, rated stands used before working under raised machinery	☐ Not, or only occasionally	☐ Usually	☐ Always
Loads, attachments and modifications are within manufacturer's recommendations	☐ Not checked	☐ Usually	☐ Always
Loads and attachments are suitable for the operating environments	☐ Only occasionally	☐ Usually	☐ Always
Registration and operator licences (if used on roads)	☐ Not in place	☐ Some in place	☐ Complete and up-to-date
Rules: only approved operators; no passengers; no getting off while in motion; operate from seat only	☐ Not clear or followed	☐ Usually followed, but not always	☐ Always followed
Rules: 'no go' zones; road use and speed limits	☐ Not clear or followed	☐ Usually followed, but not always	☐ Always followed

Self-assessment – Add your actions to your Action Plan at the back of this folder

For tractors, mobile plant and all attachments	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Plant serviced and maintained to manufacturer's recommendations	☐ Not done	☐ Some service to recommendations	☐ All service to recommendations
Records of maintenance	☐ Not kept	☐ Some	☐ Complete and up-to-date
Operator manuals available	☐ None available	☐ Some available	☐ Available for all tractors and plant
Standard Operating Procedures (SOPs) for plant and attachments	☐ SOPs not set up	☐ SOPs set up, not used by all	☐ SOPs are used by all workers
Operators are trained and competent to use the tractors for the tasks required	☐ None, or not known	☐ Some	☐ All
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up-to-date
Less experienced operators/ learners are supervised	☐ Never	☐ Sometimes	☐ Always
Pre-operational checks are done	☐ Never	☐ Sometimes	☐ Always
Keys removed when not in operation	☐ Never	☐ Sometimes	☐ Always
Fire extinguishers and first aid kit	☐ None available	☐ Some available	☐ Available for all operators
PPE such as hearing protection, eye protection, safety boots	☐ None available or never used	☐ Sometimes used	☐ Used by all operators
Reporting damage or malfunction	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Reporting accidents and incidents	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on

NOTE: See information section of this topic for checklists to assess safety for:

- specific attachments (post-hole diggers, post drivers, slashers)
- industrial loaders
- telehandlers.

Tractors

Tractors are still one of the major causes of fatality and serious injury to all who live and work on farms, including dairy farms. Operators, passengers, bystanders and children are most at risk.

On average, each year in Australia around 20–25 people are killed when using mobile plant on farms, around two-thirds of which is attributed to tractors and associated equipment. Importantly, a key observation from the fatality data is that the fatalities approximately follow rates of exposure – meaning that age and experience do not by themselves ensure a safe outcome. (Source: Lower et al; 2017)

Some good improvements have occurred in safety around tractors. For example, the compulsory fitting of ROPS to all tractors has seen a significant reduction in tractor fatalities associated with rollovers and back flips.

Older tractors must have ROPS and PTO guards retrofitted.
Source: Dairy Australia

The general principles of risk management around use of tractors, in order of priority:

Elimination

- Ask if the older tractor is really needed to do the tasks it currently does.

Substitution

- Replace the tractor with a more modern fit-for-purpose machine and consider whether another machine is more suitable for the task e.g. telehandler or industrial loader.

Engineering

- All tractors over 560 kg must have a compliant Roll Over Protection Structure or Cabin with an integrated ROPS.
- A Falling Object Protection Structure (FOPS) should be fitted if using a Front End Loader.
- Retrofit guarding to cover moving parts such as the PTO stub and fan belt and pulley
- Fit safer step access. Provide ergonomic seating with an integrated seat belt.
- Ensure an effective exhaust with a spark arrestor.

Induction, training, supervision and rules

- Provide training and ensure competence in operation.
- Provide induction to workers on the specific model of tractor used on the farm, include pre-operational checks, access to operator's manual, and farm rules.
- Ensure the tractor is maintained, paying particular attention to brakes, steering, wheel studs, tyres and genuine parts such as pins and lynch pins.
- Supervise operators, especially new workers and the less experienced.
- Limit loads to manufacturer's specifications.
- Minimise road use (check state registration and vehicle licence requirements).
- Remove keys when not in use to prevent unauthorised use (and theft).
- Avoid the use of a tractor without sealed cab for spray application of chemicals.

Personal Protective Equipment (PPE)

- May include gloves, eye protection (including UV), safety footwear, close fitting trousers, hearing protection, if the tractor is rated above 85db, and chemical application PPE.

The following is a summary of best practice solutions to reduce the causes of fatalities and injuries associated with:

- Tractor rollovers
- Tractor run overs
- Falling objects
- Injury during tractor maintenance
- Exposure to moving parts

Tractor rollovers can occur on any terrain including roads however the risk can be greater when operating on steep and uneven terrain or near effluent ponds and dams. A back-flip can occur on very steep terrain or when towing or pulling.

Best practice

1 Ensure all tractors have ROPS or cabin with an integrated ROPS compliant to the Australian Standard AS 1636 or equivalent. This is a legal requirement.

2 Wear a seat belt. Retrofit to older tractors if not present (this may require replacement of seat and mounts).

3 Do not attach a towing chain or device to the top link of the 3-point linkage (3PL).

4 When travelling or working, keep the front-end loader (FEL) bucket or attachment as low as practical for stability and to reduce the strain on the tractor front end.

Tip

Choosing and using ROPS

- If purchasing a tractor or unsure of whether the ROPS is compliant, look for a compliance plate indicating that the frame is built to AS 1636 or an international equivalent.
- If there is likely to be contact of a ROPS with a building or other structure when working, a fold down ROPS can be considered. You must ensure any fold down ROPS is lifted back up when in use away from the overhead structures.
- Any attachments to the ROPS should be clamped on. Never drill or weld the ROPS.

Tip

Manufacturer's guidelines for maintaining tractor stability

- Check and follow manufacturer's recommendations for counterbalance when using a front end loader or 3PL attachment, and ballast requirements for axle weight distribution.

Tractor run overs can occur when operators get on and off moving tractors; operators fail to apply the handbrake when getting off, e.g. to open a gate; an older tractor is started or jump started while in gear; passengers fall from the tractor; or bystanders are nearby during operation.

Best practice

5 Never carry passengers on tractors or attachments, including FEL bucket.

6 Do not get on or off a moving tractor.

7 Never start a tractor from the ground.

8 Ensure the shuttle lever (if fitted) is guarded to prevent being knocked when getting off the tractor.

9 Maintain the hand brake so that it is effective and ensure it is engaged before getting off.

10 Maintain steps and handrails in good condition - where practicable, ensure that rails and guards protect the operator forward of the rear wheel to reduce the probability of accidental run over.

11 Maintain reverse mirrors, rotating beacons and reverse beeper (if fitted).

12 Develop a traffic management plan that separates tractors and people especially when near the home and dairy.

13 Mandate the wearing of high visibility workwear in traffic areas so that operators can see pedestrians more clearly.

14 Establish rules keeping visitors and children away from high risk workplace areas.

Falling objects occur from attachments e.g. when moving silage and hay rolls or large square bales; and when lifting or slinging loads e.g. lifting machinery off a truck. Stacking and de-stacking of rolls in a shed or truck can be hazardous to operators and bystanders.

Best practice

15 A Falling Object Protective Structure (FOPS AS 2294) must be fitted to the tractor or integrated into the cabin, especially if using a FEL

Ensure the selected FOPS is suitable for the hazard, such as making sure a bale or part of the intended load cannot slip through a gap in the protection.

16 Select correct FEL attachment for the job e.g. use spikes or grabs for hay or silage.

17 If lifting stacked squares, ensure an adequate roll-back frame is fitted on the hay forks.

18 Do not exceed the Safe Working Load (SWL) of the FEL attachment. The SWL should be clearly marked on the FEL.

19 Use a FEL attachment that is self-levelling with hydraulic load limiting valves.

20 Use rated lifting points on the loader only.

21 Use rated lifting chains and slings.

22 Use counter balances where prescribed by the manufacturer to maintain the safe working load (SWL),

23 Plan operational conditions and route for maximum stability and handling.

Maintenance of tractors is critical to both efficiency and safe operation. Particular attention should be paid to brakes, hydraulics, tyres and the front end of the FEL. Wheel bearings, centre pivot pins and tyres of tractors with a FEL attachment are subject to greater load and wear and their inspection should be more frequent as use increases.

Maintenance also includes daily pre-operational checks and checks during operation, e.g. build-up of combustible material. Machinery and tractors should be shut down when blockages are being removed.

Undertaking inspection and maintenance can be hazardous, with risks including:

- crushing under raised and unsupported machinery and attachments
- exposure to hydraulic fluid under pressure
- exposure to hot surfaces such as exhausts
- falls when working at heights.

Use a counter balance to maintain stability and handling.
Source: Andrew Sullivan

Best practice

24 Undertake and schedule maintenance as per manufacturer's recommendations.

25 If moving tractors, adhere to the truck transport guidelines as provided in the National Load Restraint Guide.

26 Remove keys and tag out when maintenance is undertaken.

27 Use step platforms to access high, difficult to get at areas during maintenance.

28 Provide mechanical supports or lockout devices to raised hydraulic attachments (lower if not required to be raised for maintenance).

29 Use wheel chocks and apply brakes.

30 Use rated stands for raised axles and attachments such as slashers and tillage equipment.

31 Lower the bucket or other attachments when unattended.

32 Replace guards after maintenance is completed.

33 Maintain records of service and maintenance undertaken.

Exposure to moving parts, e.g. the PTO and attached shaft and the radiator fan and pulley.

Best practice

34 Fit and maintain a master shield cover to the PTO stub.

35 Fit PTO shaft covers (includes bell covers over universals and clutches) and maintain them in good condition. PTO covers should be chained to prevent turning with the shaft. Keep a spare on hand for quick replacement, especially during peak times.

36 Maintain and fit guards and/or cowlings to prevent contact with moving parts.

37 Never trust a PTO cover by itself, as it does not guarantee full protection from moving parts. Use training and workplace rules to ensure workers stay clear. Avoid working or stepping near an operating PTO even when covered.

Tip

Particular risks with the old timers – tractors and farmers!

- Older tractors (e.g. kept as backups) tend to pose the greatest risk. They often do not have the safety features of modern tractors, are less frequently used, poorly maintained and may not be up to the task, e.g. handling heavy loads.
- The risk of injury is significant, even for highly experienced older farmers.
- Consider whether the older tractor is really needed or whether another machine would be more suitable for the task e.g. industrial loader, telehandler.
- Older unsafe tractors (e.g. without ROPS) are best traded in or sold for scrap.
- Disable older tractors that are not fit for use.

Operator health and exposures – In addition to the risk of physical injury, operators can be exposed to a range of health hazards, including noise, hazardous substances, heat, poor posture, vibration, UV light and fatigue.

Best practice

Noise exposure

- Check noise ratings of the tractor at the time of purchase.
- Maintain cabin seals and insulation.
- Provide and ensure the use of hearing protection.
- Monitor noise levels of tractors.
- Provide hearing tests for operators.
- All tractors without cabins require the use of ear protection when the tractor is used for more than a few minutes, due to the damage caused by accumulated exposure. Inexpensive but effective ear muffs or equivalent must be supplied in convenient locations to manage this hazard.

Hazardous substances

- Use a tractor with a cab, maintain suitable cab seals and filters.
- Use charcoal filters when applying agricultural chemicals.
- Consult the chemical Safety Data Sheet (SDS) for the relevant Personal Protective Equipment (PPE) to be used.

Heat

- Ensure hot surfaces such as exhausts have a well-maintained cowling wherever contact could occur.
- Use an air-conditioned cab.

Poor posture and vibration

- Seat adjustments should be lubricated and functional.
- Ergonomically designed seats that are fully adjustable, including lumbar support, swivel and with suspension are preferred.
- Keep floors of the cabin clear of debris, tools and equipment.

UV exposure

- Have cabins with UV rated glass.
- Wear UV rated sun/safety glasses.

For open tractors

- Clamp a shade to the ROPS.
- Wear sunscreen, full length clothing, broad brimmed hat.

Fatigue

- Develop and use a fatigue management plan for busy periods in consultation with workers.
- Schedule work to enable uninterrupted sleep.
- Take regular short breaks e.g. every hour stop to walk, stretch and rest.

Tip

Tractors and other machinery crossing or travelling on roads:

- Road use requires registration and a vehicle or tractor licence.
- Indicators and lights must be working.
- There should be a working rotating beacon and appropriate signage for attachments e.g. wide load.
- Seat belts must be worn when on roads.

Learn more

Safe use of tractors with attachments, WorkSafe Victoria

worksafe.vic.gov.au/resources/safe-use-tractors-attachments-handbook-workplaces

Farmsafe guide on Tractors

farmsafe.org.au/tractor-operation

Front end loaders and their attachments on tractors, WA and NSW Workcover

commerce.wa.gov.au/sites/default/files/atoms/files/front_end_loaders_on_tractors.pdf

Tractors and other machinery crossing or travelling on roads require appropriate signage.

Source: Dairy Australia

Tractor attachments

Post-hole diggers

Being caught up in the auger of a post-hole digger can be fatal. Entanglement of clothing, hair and limbs usually occurs when working close to the auger to either clear away dirt or when trying to add extra downward pressure on the digger. Ensure that PTOs are guarded and exclude bystanders when operating.

Post drivers

Serious injuries and fatalities can occur if operators and assistants place their hands, arms or heads between the post and the rammer ('dolly') when lining up or holding the post. The preferred post driver is an impact driver or fully enclosed caged hammer driver with an integrated interlock.

Tip

Dial Before You Dig

- **Be aware of the presence of underground services before using post hole diggers or post rammers. 'Dial Before You Dig' is a free service 24/7 online at 1100.com.au or by phoning 1100 in business hours.**

Extra safety questions to assess safety status for post-hole diggers and post drivers

- Are augers guarded where practical?
- Are hammers guarded to 2.4m height and 300mm below drop?
- Is a post guide in place so posts don't have to be held?
- Are belts, pulleys, chains, sprockets and ropes guarded?
- Are controls clearly and permanently labelled?
- Do controls return to neutral when released?
- Do operators wear close fitting clothing and tie their hair back?

Slasher with clutch, PTO and debris guards fitted.
Source: Andrew Sullivan

Slashers

Most injuries from slashers are to operators and bystanders from flying debris and from entanglement in PTOs, clutches and universals. Operators must wear appropriate PPE, and never operate in the presence of other people. This means powering down and waiting for a clear operating environment to resume.

Some serious injuries and fatalities have occurred whilst operators are trying to remove entanglements under the slasher and hydraulic failure occurs. Use rated stands and at least hardwood blocks when working under raised slashers and other implements.

Tip

Extra questions to assess safety status for slashers

- Are PTOs, clutches and universals guarded?
- Are there chain or steel deflectors on front and rear discharges?
- Are chocks or rated stands used when slashers are raised?

Balers

The guarding of belts and pulleys on older balers is a challenging task, given the need to ensure easy inspection of components, and the risk of refuse building up, creating a fire hazard. Many newer baler designs address this problem, with large spring-loaded guarding doors that open easily to allow for inspection and stand sufficiently clear of the moving parts to discourage the accumulation of refuse.

Tip

Guards and safety devices matter

- Personnel must not remove guards or disconnect interlock or warning alarm devices and switches which have been designed and fitted to protect operators and pedestrians.
- Always refit guards after maintenance.
- Repair guards that are damaged or corrode.
- Some moving parts on feed out wagons and carts cannot be fully guarded as this would impede operation. It is critical to exclude bystanders and shut down when undertaking maintenance, removing blockages or making adjustments.

Learn more

Post Drivers, NSW Workcover and Worksafe Victoria

worksafe.vic.gov.au/resources/post-drivers-industry-safety-standard-handbook-workplaces

Slashers, NSW Workcover and Worksafe Victoria

commerce.wa.gov.au/sites/default/files/atoms/files/slashers_guide_pdf.pdf

Post driver with guards fitted AS.
Source: Munro Engineering

Other mobile plant such as industrial loaders and telehandlers

Crush hazards must be signed.
Source: Dairy Australia

Industrial loader with articulated steering.
Source: Dairy Australia

Industrial loaders

Industrial loader hazards are similar to those of tractors with an FEL attachment, but there are some clear differences that include size, operator blind spots, articulation, cabin access and access for maintenance.

Unlike standard tractors fitted with a front bucket, many large loaders do not use automotive steering mechanisms. Instead, they steer by a hydraulically actuated pivot point set exactly between the front and rear axles. This is referred to as 'articulated steering' and allows the front axle to be solid and carry greater weight. Articulated steering provides better manoeuvrability for a given wheelbase. Since the front wheels and attachment rotate on the same axis, the operator is able to 'steer' the load in an arc after positioning the machine, which can be useful. The trade-off is that when the machine is 'twisted' to one side and a heavy load is lifted high, it has a greater risk of turning over to the 'wide' side.

Best practice

1. Ensure the cabin has an integrated and rated FOPS.
2. Isolate the operating area to exclude pedestrians.
3. Ensure clear warning signage on the loader, not to approach when the engine is running (especially warning of articulation crush zone).
4. Ensure that cabin access ladders and steps are maintained.
5. Ensure windscreen, rear vision mirrors and front and rear working lights are in good condition and clean.
6. Ensure the reverse beepers, rotating beacon and any emergency stop buttons are operational.

Tip

Extra questions to assess safety for Industrial Loaders

- Do operators have formal training to achieve competence?
- Does the cabin have FOPS fitted?
- Is the articulated crush zone clearly signposted?
- Are the windscreens, rear vision mirrors and front and rear working lights clean and in good condition?
- Are steps and ladders in good condition?
- Are reverse beepers and rotating beacon operational at all times?
- Where fitted, are emergency stops operational?
- Are hand rails and guard rails fitted to prevent falls?
- Are hydraulic hoses and rams checked for leaks?
- Are hydraulic lines/hoses gathered in blocks?

Telehandlers

A telehandler is similar in appearance and function to a forklift but is more a crane than forklift, with the increased versatility of a single telescopic boom that can extend forwards and upwards from the machine. On the end of the boom several attachments, such as a bucket, bucket grab, pallet forks and work platform can be fitted.

Telehandlers come in a variety of sizes with different capacities for lifting, carrying, scooping and stacking. Selecting the right telehandler for the job usually comes down to size. Choice will depend on the load to be shifted and the space you have to work in. Make sure the telehandler will have enough room to operate and has the capacity to complete the required task.

The advantage of the telehandler is also its biggest limitation, as the boom extends or raises while bearing a load, it acts as a lever and causes the machine to become increasingly unstable, despite counterweights in the rear. This means that the lifting capacity quickly decreases as the working radius (distance between the front of the wheels and the centre of the load) increases.

Remove any telehandler from service if it has a broken or missing side window.

When are licences required? (Check with local authorities as these may change from time to time)

- A licence is required for telehandlers of a capacity greater than 3 Tonne
- Operators of telehandlers with a capacity of three Tonne or less do not require a licence, but should be competent in their use.
- If the telescopic handler is capable of slewing, a slewing mobile crane high risk work license is required.
- If operating the machine with a work platform and a boom length over 11m an elevating work platform high risk work license is required.

Best practice

1 In additional to those mentioned for tractors and loaders, it is essential that training to competency is achieved by operators.

2 Check with state WorkSafe authorities for any operator high risk licence requirements.

Telehandler with integrated FOPS and roll back protection.
Source: Dairy Australia

Tip

Extra questions to assess safety for Telescopic Handlers

- Is training provided to ensure competence and is a licence obtained if relevant?
- Is the telehandler the right size and capacity for the task?
- Is the load checked for weight, composition and stability?
- Is the attachment suitable for the task and size of telehandler?
- Is the attachment physically checked before attaching?
- Is it securely attached and does it move as expected?
- Is the working environment checked for hazards such as powerlines, pedestrians, ground surfaces, terrain, weather, traffic, buildings and other structures?

Learn more

Telehandlers Design and Licensing, Worksafe 2010

worksafe.vic.gov.au/news/2024-01/new-licence-practical-telehandler-training

Farm records

Farm records

Fixed plant

Fixed plant

In addition to mobile plant such as tractors and quad bikes, fixed plant on dairy farms includes the rotary or herringbone dairy, milk vats, vacuum and milk pumps, feed augers, and pumps for effluent, water and irrigation.

There are many hazards associated with this plant including:

- moving parts
- electrical hazards
- chemical exposure
- hot or high pressure fluids
- working at heights
- confined spaces
- animal movement
- manual handling
- dust
- noise.

Exposure to these hazards has resulted in fatalities and serious, long-term injury.

Poor design, inadequate installation and insufficient maintenance can accentuate these hazards and introduce new ones such as collapse, fire and explosion.

Equipment upkeep:

If safe design is included at the original design and planning stage, retrofitting of safety features can be avoided.

In most cases the safety and ergonomics of fixed plant must be continuously improved during its long service life.

Regular inspection of equipment and installations for damage is also important.

Training and instruction:

Relevant training, instruction, information and supervision ensures that workers are able to undertake tasks safely and without risk to health.

By Mex Cooper, The Sydney Morning Herald **August 18, 2011**

Teen dies in dairy farm tragedy

A teenager has died after a farming accident in which it is believed his head was crushed by a milking machine in Victoria's north this morning.

The 17-year-old dairy farmer was operating a rotary milking machine just after 7am at a property in Yalca, north of Shepparton when he was wounded.

Paramedics tried to revive the local teen but his severe head injuries and blood loss proved fatal and he died at the Waaia-Bearii Road farm, an Ambulance Victoria spokeswoman said.

She said the boy was alone at the time of the accident but it was believed he had become caught in the machine.

The farmer's death brings the number of work-related deaths to 13 for the year, five in the past month. Police will prepare a report for the coroner.

Step-by-step – Setting up for safety around the dairy and other fixed plant on your farm

As an employer or person conducting a business on the farm you have a legal responsibility to ensure that everyone who uses or is exposed to fixed plant does so without risk to their safety and health. Use these resources to ensure that you comply with this requirement.

Getting started

- **Read through this information pack** carefully. ☐
- Complete the fixed plant **Safety Self-Assessment** (traffic lights) page. ☐
- **Make a list** of things to do and **set a date** to have each thing completed in the **Action Plan.** ☐
- Set up your **Standard Operating Procedures** ☐
- Put a copy with the documents you use to **induct new staff.** ☐
- Review your **maintenance of fixed plant** and ensure you have a record of what is done. ☐
- Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting). ☐

Resources in this section

- **Information** about safety in relation to fixed plant on dairy farms and your legal obligations.
- **Safety Self-Assessment** for fixed plant.
- **Checklist** Appendix B in Managing the risks of plant in the workplace Code of Practice, Safe Work Australia.

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety**
You can edit the templates to suit your farm.

WHS regulations require you to manage the risks to health and safety associated with use of any plant. You must:

- identify reasonably foreseeable hazards that could give rise to the risk of an accident
- eliminate the risk so far as is reasonably practicable
- if it is not reasonably practicable to eliminate the risk, minimise it by implementing control measures in accordance with the hierarchy of control
- consult, so far as is reasonably practicable, with workers who are (or are likely to be) using the plant.

The regulations require that risk control measures must be:

- fit for purpose
- suitable for the nature and duration of the work
- installed, set up and used correctly.

The regulations require that a person with management or control of plant at a workplace must:

- so far as is reasonably practicable, prevent unauthorised alterations to or interference with the plant
- take all reasonable steps to ensure the plant is only used for the purpose for which it is designed, unless a competent person has assessed that the proposed use does not increase the risk to health and safety
- ensure all safety features, warning devices, guarding, operational controls, emergency stops are used in accordance with instructions and information provided.

By law, you are responsible for all the people who operate plant or are bystanders on your farm.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For fixed plant (including rotary or herringbone dairy, augers and pumps)	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Guards on moving parts of pumps, electric motors, compressors and small engines	☐ None	☐ Some guarded	☐ All guarded
Barriers or guards on crush areas like rapid exit ends, banana rail on rotary	☐ None	☐ Some guarded	☐ All guarded
Emergency stop buttons fitted to plant such as rotary, roller mills	☐ None	☐ Some	☐ All
Plant that starts automatically is guarded and signed	☐ None	☐ Some	☐ All
Noisy plant isolated from work areas where possible	☐ Not addressed	☐ Some removed	☐ All removed
Head-high obstacles and sharp edges in work area	☐ Not addressed	☐ Some padded or removed	☐ All removed
Flow restrictors on hydraulic lines	☐ None	☐ Some	☐ All
Slip and trip hazards in the main work areas and walkways	☐ Not addressed	☐ Some removed	☐ All removed
Fall hazards when working or doing maintenance	☐ Not addressed	☐ Some removed	☐ All removed
Lock-out system on plant when doing maintenance	☐ None	☐ Some plant	☐ All plant
Operator controls and ease of operation	☐ Not addressed	☐ Some plant	☐ All plant simple and easy to operate
Maintenance schedules established and followed	☐ None	☐ Some plant	☐ All plant
Records of maintenance	☐ Not kept	☐ Some	☐ Complete and up to date
Standard Operating Procedures (SOPs) as required	☐ SOPs not set up	☐ SOPs set up, not used by all	☐ SOPs are used by all workers
Operators are instructed, trained and competent to use the plant	☐ None, or not known	☐ Some	☐ All
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up to date
Less experienced operators are supervised	☐ Never	☐ Sometimes	☐ Always
PPE such as dust masks, eye protection, hearing protection, non-slip boots – supplied nearby	☐ PPE not available	☐ PPE available, not used by all	☐ PPE is used by all workers
Reporting faulty plant and equipment	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Recording of accidents and incidents	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers

In and around the dairy and plant room

Considering the safety of farmers, workers, families, visitors and cows at the design stage for fixed plant can reduce the risk of injuries. Safety features of the plant and the potential hazards should be identified whenever you are planning for a new dairy; expanding or renovating an existing dairy, feeding or effluent system; or incorporating new plant such as a milk vat. Codes of Practice around plant help identify hazards and their associated risks.

The most common fixed plant risks are:

- **entanglement in moving parts:** for example, hair, jewellery or clothing caught on rotating shafts of pumps.
- **crushing:** for example, collapse of plant such as augers; activation of rotary or rapid exits without awareness of others present; becoming trapped between the moving rotary and fixed rails; being crushed by cows getting into the pit
- **cutting, stabbing and puncturing:** for example, on sharp edges of augers
- **shearing of body parts:** for example, hand contact with auger moving parts; contact with v-belt or chain-pulley drives on pumps and augers; contact with moving rotary platform rollers
- **striking:** for example, being kicked by cows; unexpected movement such as automated feeder hoppers, automated exit and drafting gates or robotic arms
- **high pressure fluid:** for example, hydraulic drives on gates, bales and rapid exits
- **hot water or hot water pipes**
- **electrical:** for example, electric shock from faulty cable and switches, overloading of electrical switches, water on electrical switches, lack of isolation when undertaking maintenance in the dairy and feed sheds
- **slipping, tripping and falling:** for example, slipping on wet, oily and dusty surfaces; tripping on hoses, uneven surfaces and drains; falling from rails, ladders, steps and platforms when working and undertaking maintenance
- **ergonomic:** for example, awkward postures and repetitive work when milking; lift and dragging of yard gates; dragging, lifting and moving heavy and/or awkward objects such as water and milk buckets, yard wash hoses, feed bags and chemical drums; moving down cows
- **noise:** for example, from vacuum pumps, hammer mills and augers and generators
- **inadequate lighting:** in dairy, plant room and feed shed
- **combination of hazards:** for example, software or electronic error for controls of automatic feed and milking systems; failure of hydraulic or pneumatic control systems; restarting after power failure
- **other hazards:** for example, working in designated confined spaces; exposure to chemicals, dusts and harmful gases.

Learn more

Codes of Practice can help identify and manage ` risks of plant in the workplace:

Use Appendix B checklist in Managing the risks of plant in the workplace Code of Practice, Safe Work Australia, March 2016.

safeworkaustralia.gov.au/doc/model-code-practice-managing-risks-plant-workplace

This checklist is useful in identifying hazards associated with existing and new plant and can also be helpful when considering purchase of equipment. It is included in this topic in your Farm Safety Manual.

Best practice

1 Identify hazards and control the risk to injury at the design and installation stage.

2 Use the Code of Practice for managing risks of plant in the workplace and its associated checklists to identify hazards in the dairy.

3 Involve workers in the process.

4 Control the risks.

5 Monitor the effectiveness of those controls.

Safe work procedures should include instructions and information on:

- who may use an item of plant e.g. only authorised or licensed operators
- how to safely access and operate plant
- position, function and operating sequence of controls and instruments of the plant including operator protective devices
- relevant design features of the plant
- attachments and components that can be used with the plant
- procedures for reporting a fault, unsafe practice, damage to the plant, incident or near misses
- how to carry out inspections, cleaning, repair, maintenance and shut-down
- emergency procedures if things go wrong

Operators should have easy access to the plant manufacturer's instructions for safe use and maintenance of the plant.

Learn more

For more information, see other topics in your Farm Safety Manual:

- Confined Spaces
- Working at Heights
- Working with Livestock
- Farm Chemicals
- Power and Electrical hazards
- Water and Effluent hazards
- Manual Handling
- Working Environment (including noise, dust).

Rotary platforms

People working at the cups on and cups off positions of a rotary are not always able to see or hear each other. It is important that if there is a problem that puts one person at risk, the other person does not engage the rotary. Unlike the common stop/go of the lanyard, mushroom buttons require resetting. They should be located at both the cups on and cups off positions.

Crushing of limbs can occur where the rotary passes fixed rails and where hydraulic and rapid exit gates operate. Risk is greatest where operators cannot see other people or where the operation is automatic. The design of these areas needs to include larger spaces, barriers or guarding.

Fit a skirt around the rotary platform to restrict access to platform rollers.

Emergency stop button on a rotary.
Source: Dairy Australia

By law

WHS regulations require operator controls must be:

- identified to indicate their nature, function and direction of operation
- located so they can be readily and conveniently operated
- located or guarded to prevent unintentional activation
- able to be locked into the 'off' position to disconnect from an energy source.

Emergency stops must be:

- prominent, clearly and durably marked and immediately accessible to each operator of the plant
- RED in colour
- not adversely affected by electrical or electronic circuit malfunction
- where more than one emergency stop is fitted they must be of a 'stop and lock-off' type so that the plant cannot be restarted after a stop control has been used unless each stop control is reset.

Slippery or uneven surfaces and obstacles

Slips, trips and associated falls are one of the most common causes of injury in and around the dairy. Their cause is often associated with uneven surfaces, obstacles such as hoses, pipes and leads, uncovered drains, edges of mats and general clutter particularly in main work areas such as the milking position, in feed rooms and plant rooms and in walkways.

Slippery surfaces such as concrete often occur because of algae build up, oil, milk, feed, cleaners and manure. Regular cleaning using pressure washers or chemical detergents or absorbents will reduce the slip hazard as will the use of non-slip matting and specially designed footwear-gumboots.

Head-high obstacles such as pipes and rails can be hazardous.

Low-level falls can occur around the dairy when climbing on rails and other structures to undertake maintenance or access cows. A good set of portable steps with platform and handrail will often reduce this risk. Steps to access different levels in the dairy should be made to the Australian standard AS 1657 and include a hand rail and non-slip surface. Construction of a separate AI and pregnancy testing race at ground level also reduces the risk. If a working platform is to be used adjacent to the rotary ensure it is constructed to AS 1657 and includes steps, handrails and toe boards to prevent falls.

Overall controls include:

- removing head-high pipes and rails where possible, and covering those that cannot be removed with high-vis coloured padding
- providing platform steps for reaching cows for tail painting or when undertaking maintenance
- using rubber matting or grooved concrete to increase traction for cows and people
- providing non-slip steps with hand rails
- clearly identifying edges of steps and changes in floor height
- improving ventilation and light and drainage to improve surface drying and reduce algae build up
- repairing water and oil leaks
- providing signage for temporary slippery areas
- wearing appropriate PPE including gloves, aprons and non-slip boots.

Tip

Reducing risks associated with hot water:

- Replace the hot water pipe jointing to ensure there are no leaks or weaknesses.
- Position extremely hot water taps out of reach of children and use lockout type taps.
- Extend hot water tap pipes into drums and fit lids to reduce splashing.
- Lag hot water pipes to prevent burns.
- Clearly identify water taps including hot water taps as red and cold as blue.
- Clearly identify water suitable for drinking.

Pumps, compressors, crushers and augers

Belts and pulleys commonly found on auger motors and milk pumps, vacuum pumps and compressors can draw in exposed fingers, clothing and hair. Exposed auger flights can also shear off hands, fingers and feet.

Often these types of plant start automatically (for example with sensors on feeders) and should be locked out when a guard is removed for maintenance.

Farms that process their own feed grain often use a mobile grain auger for truck to silo transfer. This auger may be supplied by a contractor, but nevertheless the risks associated must be controlled by the farm. Risks include entanglement in the auger flight, contact with moving parts such as belts and pullies, chain and sprockets and drive shafts, contact with winches and wire rope, collapse, tipping, contact with overhead powerlines, manually moving the auger, noise and dust.

Controls include:

- using blower tubes and grain shifters instead of mobile augers where possible
- fitting guards to moving parts on augers, grain crushers including chain, belt and pullies, rotating shafts
- fitting an emergency stop button for augers near the grain inlets
- using suitable jockey wheels (automated) for manoeuvring augers
- providing signage on mobile augers reminding users to empty fully before moving; operate clear of power lines; always use a mesh covered hopper, not to remove guards during operation and to use hearing protection
- using dust masks, eye and hearing protection when working with the feed system, including mobile augers.

Tip

Reducing risks associated with noise:

- Locate noisy plant such as vacuum pumps, compressors, roller, hammer mills either outside of the dairy or inside an insulated plant room.
- Use hearing protection while in plant rooms containing vacuum pumps and or compressors.

Reducing risks associated with high pressure fluids:

- Flow restrictors fitted to hydraulic lines prevent free fall in the event of hydraulic hose failure.

Tip

Plant lockout prevents the accidental start-up of machinery or equipment:

- Many electrical switches can be fitted with a padlock through a hole in the 'off' position. This should be used when undertaking maintenance to prevent someone turning the power on.
- There are many commercial lockout devices such the example at: seton.net.au/lockout-tagout/lockout-devices.html.

Machine guarding

A guard is a physical or other barrier which prevents contact with moving parts or minimises access to dangerous areas of plant.

Australians Standards for guards are based on the strict principle that legs, arms, hands and fingers must not be able to reach through or around guards to be able to contact moving parts.

In some cases guarding is not practicable, for example on tractor implements such as round bale feeders. These machines must be kept separated from people at all times with site rules, training, and traffic management, including restricting access from children or visitors.

By law

WHS regulations require that guarding should:

- be of solid construction and securely mounted to resist impact or shock
- make bypassing or disabling the guard whether deliberate or accidental as difficult as is reasonably practicable e.g. create a physical barrier that can only be altered or removed with a tool
- not create a risk in itself (for example it must not obstruct operator visibility, weaken the plant, cause discomfort to operators or introduce new hazards like pinch points, or rough or sharp edges)
- be properly maintained
- control the risk of things being ejected, and
- have to be replaced before the plant can be restarted if it has been removed to allow for maintenance and cleaning.

Mesh guard on grain hopper, preventing limb access to auger flight.
Source: Dairy Australia

Skirt restricts access to platform rollers.
Source: Dairy Australia

Records of maintenance and inspection

Records of maintenance, inspections, alterations or tests carried out on the plant should be kept. They should include:

- information that identifies the plant
- the date of inspection, service and repair
- operating hours meter readings (where a meter is fitted)
- details of the repair work carried out
- details of alterations made to the plant
- name, qualifications and competency of the person who carried out the work.

Modifying plant

A simple modification may not alter the design of the plant or the way it operates. However a substantial modification can alter the design characteristics of the plant and affect its safety. A person who modifies plant has the same obligation as a designer and a manufacturer under the WHS Regulations.

If you need to modify plant you have several options including:

- carrying out the work yourself if you are a competent person
- sending it to the manufacturer or supplier to be modified
- engaging a local engineering workshop with the expertise to do the work safely.

If you carry out modifications that introduce new risks or hazards you should:

- gather information preferably from the manufacturer or a relevant technical standard about the plant. This will help you to include safety measures when making the modification
- carry out an assessment of the change using the information gathered to make sure the safety measures minimise the risks so far as is reasonably practicable. You should implement further control measures for risks highlighted in the assessment
- get independent advice if you are unsure of your assessment. You should only modify plant in ways recommended by the manufacturer or other documented procedures
- modification of safety measures already located on the plant should not be done.

If you are buying or selling second-hand plant

A supplier of plant must:

- take all reasonable steps to obtain the information required to be provided by the manufacturer
- when the plant is supplied, ensure the person to whom the plant is supplied is given the information obtained by the supplier.

A supplier of second-hand plant must ensure, so far as is reasonably practicable, that any faults in the plant are identified. Before plant is supplied, the supplier of second-hand plant must ensure that the person to whom the plant is supplied is given written notice of:

- the condition of the plant
- any faults identified
- if appropriate, that the plant should not be used until the faults are rectified.

Hazard checklist

Use this checklist to identify hazards in new and existing plant and to assist when considering plant to purchase.

From managing the risks of plant in the workplace Code of Practice, Safe Work Australia, March 2016.

Assessed by: **Date:**

Description of plant:

Activities (e.g. use, cleaning and maintenance):

'Yes' to any of the following indicates the need to implement appropriate control measures.

Entanglement	**Yes**	**No**
Can a person's hair, clothing, gloves, necktie, jewellery, cleaning brush or rag or become entangled with moving parts?	☐	☐
Crushing	**Yes**	**No**
Can anyone be stabbed or punctured due to:		
• material falling off the plant?	☐	☐
• uncontrolled or unexpected movement of the plant?	☐	☐
• lack of capacity for the plant to be slowed, stopped or immobilised?	☐	☐
• the plant tipping or rolling over?	☐	☐
• parts of the plant collapsing?	☐	☐
• coming into contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	☐	☐
• being thrown off or under plant?	☐	☐
• being trapped between the plant and materials or fixed structures?	☐	☐
• other factors not mentioned?	☐	☐

Hazard checklist continued

Cutting, stabbing or puncturing	Yes	No
Can anyone be stabbed or punctured due to:		
• coming in contact with sharp or flying objects?	☐	☐
• coming in contact with moving parts during testing, inspection, operation, maintenance, cleaning or repair?	☐	☐
• the plant, parts of the plant or work pieces disintegrating?	☐	☐
• work pieces being ejected?	☐	☐
• the mobility of the plant?	☐	☐
• uncontrolled or unexpected movement of the plant?	☐	☐
• other factors not mentioned?	☐	☐
Shearing	**Yes**	**No**
Can anyone's body parts be sheared between two parts of the plant, or between a part of the plant and a work piece or structure?	☐	☐
Can anyone be struck by moving objects due to:		
• uncontrolled or unexpected movement of the plant or material handled by the plant?	☐	☐
• the plant, parts of the plant or work pieces disintegrating?	☐	☐
• work pieces being ejected?	☐	☐
• mobility of the plant?	☐	☐
• uncontrolled or unexpected movement of the plant?	☐	☐
• other factors not mentioned?	☐	☐
High Pressure Fluid	**Yes**	**No**
Can anyone come into contact with fluids under high pressure, due to plant failure or misuse of the plant?	☐	☐

Hazard checklist continued

Electrical	Yes	No
Can anyone be injured by electrical shock or burnt due to:		
• the plant contacting live electrical conductors?	☐	☐
• the plant working in close proximity to electrical conductors?	☐	☐
• overload of electrical circuits?	☐	☐
• damaged or poorly maintained electrical leads and cables?	☐	☐
• damaged electrical switches?	☐	☐
• water near electrical equipment?	☐	☐
• lack of isolation procedures?	☐	☐
• other factors not mentioned?	☐	☐

Explosion	Yes	No
Can anyone be injured by explosion of gases, vapours, liquids, dusts or other substances, triggered by the operation of the plant or by material handled by the plant?	☐	☐
Can anyone using the plant, or in the vicinity of the plant, slip, trip or fall due to:		
• uneven or slippery work surfaces?	☐	☐
• poor housekeeping e.g. offcuts, cables, hoses obstructing walkways, spills not cleaned up?	☐	☐
• obstacles being placed in the vicinity of the plant?	☐	☐
• other factors not mentioned?	☐	☐
Can anyone fall from a height due to:		
• lack of a proper work platform?	☐	☐
• lack of proper stairs or ladders?	☐	☐
• lack of guardrails or other suitable edge protection?	☐	☐
• unprotected holes, penetrations or gaps?	☐	☐
• poor floor or walking surfaces, such as the lack of a slip-resistant surface?	☐	☐
• steep walking surfaces?	☐	☐
• collapse of the supporting structure?	☐	☐
• other factors not mentioned?	☐	☐

Hazard checklist continued

Ergonomic	Yes	No
Can anyone be injured due to:		
• poorly designed seating?	☐	☐
• poorly designed operator controls?	☐	☐
• high forces?	☐	☐
• repetitive movements?	☐	☐
• awkward body posture or the need for excessive effort?	☐	☐
• vibration?	☐	☐
• other factors not mentioned?	☐	☐
Combination of hazards	**Yes**	**No**
Can anyone be injured due to unexpected start-up, unexpected over-run/over-speed (or similar malfunction) from:		
• failure/disorder of the control system, for example a hydraulic system?	☐	☐
• restoration of energy supply after an interruption?	☐	☐
• external influences on electrical equipment?	☐	☐
• damaged or poorly maintained electrical leads and cables?	☐	☐
• other environmental factors (gravity, wind, etc)	☐	☐
• errors in the software?	☐	☐
• errors made by the operator?	☐	☐
• other factors not mentioned?	☐	☐

Hazard checklist continued

Other hazards	Yes	No
Can anyone be injured due to:		
• noise?	☐	☐
• inadequate or poorly placed lighting?	☐	☐
• entry into any confined spaces of the plant?	☐	☐
• failure to select plant that is suitable for its intended use?	☐	☐
• contact with hot or cold parts of the plant?	☐	☐
• exposure to hazardous chemicals, radiation or other emissions released by the plant?	☐	☐
• lack of operator competency?	☐	☐
• other factors not mentioned?	☐	☐

Farm records

Farm records

Contractors

Step-by-step – Setting up safety for contractors on your farm

Contractors are often engaged to carry out tasks such as making hay or silage, picking up calves and other livestock, building and maintenance work, veterinary work, herd testing, artificial insemination (AI), delivering fuel, grain and other feed sources, fertilising, fencing and milk pickup.

You need to manage the risks to a contractor's health and safety as you would for any other worker. This includes a site-specific induction for contractors before the work begins and ensuring the work is completed safely, according to agreed procedures. This contributes to your safety management and assists them to do their tasks effectively.

Resources in this section

- **Information** about safety for visitors, children and traffic on dairy farms and legal obligations
- **Safety Self-Assessment.**
- **Templates**
  - List of current contractors
  - Request for contractor details
  - Contractor Safety Induction Checklist

Templates are also available at thepeopleindairy.org.au/farm-safety.

Safety induction for contractors

Many contractors work in multiple industries and are used to providing evidence of their qualifications/competency and their insurances to businesses that contract them. It is straightforward for them. Once you have their details on file, you need only update them on an annual basis.

But it is important to talk through safety for each job. A safety induction checklist helps you discuss each job and your safety expectations with each contractor. It also gives you a record of their agreement to abide by your safety requirements.

Use the template available in this topic to set up a document that is customised for your farm and the contractors you use. Make edits and add in your farm specifics.

You will also need an up-to-date farm map that you can mark-up to show where you want the contractor to work, the routes they should take, and any hazards on the farm they may encounter.

Meet with each contractor and go through the safety induction process as part of the business of contracting the job. Discuss the specifications of the job and the safety requirements at the same time.

Ensure the details on the Contractor Safety Induction Checklist are filled in and it is signed by the contractor. This shows you take your responsibilities seriously. File the checklist in your records and retain for two years.

Tip

Print a number of copies of your Safety Induction for Contractors checklist so each contractor can also take a copy for their records and provide copies to their workers.

1. Getting started

- [ ] **Read through this topic** carefully.
- [ ] Complete the contractors **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of things to do and **set a date** to have each thing completed in the **Action Plan.**

2. Setting up your paperwork

- [ ] **Make a list** of the contractors you use.
- [ ] Ask each of them to **send you their business, licence and insurance details.**
- [ ] **Customise the Contractor Safety Induction Checklist template** for your farm and contractors, including your farm map.

3. Meeting with each contractor

- [ ] Go through the **safety induction process.**
- [ ] File your **records.**

Self-assessment – Add your actions to your Action Plan at the back of this folder

For contractors	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
A map of your farm with hazards marked	☐ Not available	☐ Sometimes provided	☐ Always provided to contractors
Evidence contractors and their workers have relevant licences/certificates	☐ Never check	☐ Sometimes check	☐ Check all and have copies on file
Evidence they have relevant insurances – public liability and WorkCover	☐ Never check	☐ Sometimes check	☐ Check all and have copies on file
Safety induction for contractors before work starts, including known hazards, rules, no-go zones, authorised use of on farm equipment	☐ Rarely	☐ Sometimes	☐ Always
Contractors have appropriate safety plans to eliminate or control risks associated with high risk hazards such as working at heights or use of hazardous substances	☐ Rarely	☐ Sometimes	☐ For all jobs
Contractors inform you when they are going to be and are on-site	☐ Rarely	☐ Sometimes	☐ Always
Contractors notify you about plant, vehicles, equipment, materials and substances they will be using	☐ Rarely	☐ Sometimes	☐ Always
Their plant and equipment is well maintained and has relevant safety features such as guards, emergency stops, carbon filters	☐ Not in place or not known	☐ Mostly	☐ Always
Their portable electrical equipment is tested and tagged	☐ Not in place or not known	☐ Mostly	☐ Always
Contractors induct their staff around safety requirements for your jobs	☐ Rarely	☐ Sometimes	☐ Always
Contractors supervise their staff on your jobs	☐ Rarely	☐ Sometimes	☐ Always
Contractors and their workers use relevant Personal Protective Equipment (PPE)	☐ Rarely	☐ Sometimes	☐ At all times
Contractors notify you of injuries, incidents or near-misses	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all contractors
You monitor contractors' work to ensure it is safe	☐ Never check	☐ Sometimes check	☐ Check all jobs
You take action if contractors are not working safely	☐ Rarely	☐ Sometimes	☐ Always

Contract list template

Farm name:

Contractor	Services provided	Date details on file	Comments

Contractor's details

Farm name:

We are updating our records of contractors who provide services on our farm.
Please provide us with the information below, by emailing or faxing this form to:

Email

Fax

Thanks

Contractor details

Company name

Contact person

ABN Licence/Registration no. (if applicable)

Address

Phone number Mobile

Email

Services provided

Relevant insurances you hold (Insurer/Policy Number/Cover/Expiry Date)

Public Liability

Workers Compensation

Other

Signature Date

Contractor safety induction checklist

Farm/Business name:

The health and safety of all the people who work and live on this farm is the most important responsibility that we all share.

As the farm owner/manager, we have responsibility for the health and safety of everyone who works or visits this farm, and this includes contractors.

The following information describes the safe work arrangements that we see as vital for ensuring the health and safety of workers and visitors to this property.

We will step you through our contractor induction process, however, you should also read this document carefully and make sure you understand it so your needs are addressed and your responsibilities are clear. If you do not understand any section, ask for an explanation.

As a contractor working on our farm, we ask that you provide this information to your workers as well. Extra copies are available.

If at any time, you feel you cannot do your job safely, stop and discuss it with the farm manager or the person from the farm supervising your work. We will then work together to fix the problem.

Contractor details

Name

Position

Company name

Details already on file? ☐ Yes ☐ No If no, fill in below

ABN Licence/Registration no. (if applicable)

Address

Phone number Mobile

Email

Names of your employees who could attend on site:

Services provided

Relevant insurances you hold (Insurer/Policy Number/Cover/Expiry Date)

Public Liability

Workers Compensation

Other

Contractor safety requirements

Approach to work

1 As a contractor to our farm, we regard you as a professional person in your trade/area of expertise. As such, you have responsibilities for your own safety and the safety of your co-workers, and others that your work activities may impact upon.

2 All contractors are responsible for ensuring they and all persons working for or contracted by them have completed a basic site induction and have read and understood the safety requirements detailed below. This must be done prior to commencing work.

3 All contractor equipment, materials and personal protective equipment must be in good condition, be properly maintained, suitable for the job at hand and comply with the relevant legislative requirements and/or Australian Standards.

4 All work must be conducted in a safe, healthy and environmentally responsible manner and comply with all legal/regulatory requirements. The appropriate codes of practice from **safeworkaustralia.gov.au** relating to the work must be followed where reasonable and practical to do so.

5 Safety and protective equipment (e.g. hearing, foot, eye protection, hard hats, high visibility vests, etc.) must be worn/used as appropriate to the work being carried out.

6 Farm staff and visitors should be demarcated/isolated from the work you are doing with appropriate warning signs, barriers etc.

7 Please do not bring children onto the farm.

Hazards on the farm

8 A farm map is provided. Marked on the map you will find hazards that we have identified which may affect the work that you do. These include:

- powerlines
- dams, creeks and waterways, wet areas
- no-go zones
- others (if relevant)

9 A copy of our asbestos register will be provided where relevant.

10 We are striving to continue improving the working environment to prevent injury and illness. Please tell us of any hazards that you and your workers become aware of. We welcome any suggestions on how we can make our farm safer.

Working on your own

11 Always let someone know where you or your workers plan to be on the farm and take a mobile phone or some other way to communicate in case of an incident.

High-risk work

12 For any high-risk work (e.g. working at heights, confined space work, working with hazardous substances), you must have appropriate training and the correct equipment for the job. For high-risk work, an appropriate formal risk assessment must be completed prior to commencement.

Handling chemicals

13 A current Safety Data Sheet (SDS) must be available for all chemicals used.

14 Anyone handling chemicals on the farm must comply with the instructions on the label and the Safety Data Sheet (SDS).

Equipment operation and maintenance

15 Equipment belong to this farm can only be used by authorised persons. Discuss any of your requirements with us prior to commencing work.

16 Only authorised people can operate equipment on this farm. You and your workers must comply with all the safety warnings on machinery and equipment, and in the operator's manual.

17 No equipment is to be repaired or maintained unless properly isolated/switched off and/or stopped.

18 Any equipment or materials found to be unsafe should be reported immediately to the person in charge and should be tagged 'out of service'.

19 All mains powered portable electrical equipment must have a current test tag.

Machinery, vehicles and traffic

20 Please abide by speed limits and watch carefully for pedestrians.

21 There may be children on this farm. Their safety is a high priority. Please be careful when driving vehicles or machinery and never reverse without checking for children.

22 No passengers are permitted on tractors, quad bikes or other farm machinery.

23 Keys must be removed from machinery after use.

24 Vehicles should be parked at:

Injury and incident reporting

25 All incidents, accidents and near misses must be reported to management and entered in the appropriate records. If you don't report an incident, accident or near miss, the farm won't get the opportunity to look at the situation that caused it. This means that it could happen again with far greater consequences!

26 All injuries or illness must be entered in the injury record book. It is located in:

Being ready for emergencies

27 Fire extinguishers are located as per the map, please carry your own and obey seasonal and total fire ban requirements.

28 First aid kits are located at:

and the following people are trained in first aid:

29 Save the emergency telephone numbers in your mobile phone. They are:

Phone

Phone

Phone

30 Know how to reach the emergency assembly point located at:

General requirements

31 Prior to coming on the farm and again when you leave. Always contact:

Phone

32 Agree to respect the business privacy/confidentiality policy of the farm.

33 Ensure that you and your workers come dressed for work in suitable clothes that do not pose a safety risk.

34 Maintain reasonable standards of housekeeping, cleanliness and hygiene. Washing facilities and toilets are located at:

35 No form of harassment/bullying will be tolerated.

36 No one may be in possession of, consume or be suffering the effects of alcohol or illegal drugs.

37 No smoking in the farm vehicles, dairy or any other farm buildings.

38 No firearms are to be brought onto the farm.

39 No dogs are to be brought onto the farm.

Specific induction information

Spraying contractors

- Have Safety Data Sheets (SDS) available for chemicals to be used.
- Use chemical as per labelled and SDS instructions.
- Use PPE according to label and SDS instructions.
- Only use trained operators to apply chemicals.
- For mixing/loading and wash down, use only the specified site at:

- Ensure spray equipment is calibrated and in good working condition.
- Only spray in suitable weather conditions with care not to affect the surrounding environment.
- Report any incident relating to chemical use e.g. spills, to farm management.

Livestock and general carriers

- On or before arrival to receive despatch or delivery instructions, drivers must contact:

Phone

- All drivers and operators must be wearing appropriate work boots.
- High visibility vests are to be worn at night.
- Plan and allow sufficient time to reduce fatigue when driving long distances.
- If trucking livestock or delivering products at night, ensure that there is adequate lighting for loading/unloading.
- Trucks must be fitted with reversing alarms.
- Truck drivers and others must not climb onto the top of stock crates without a fall arrest system in place.

Earthmoving contractors

- All operators must be trained and competent to operate skid steer and load shifting machinery.

The safety of the people on this farm is our number 1 priority.

Remember, at _____ we want everyone to go home to their family in the same condition that they arrived at this farm.

I have read and understood these CONTRACTOR SAFETY REQUIREMENTS

Signed _____

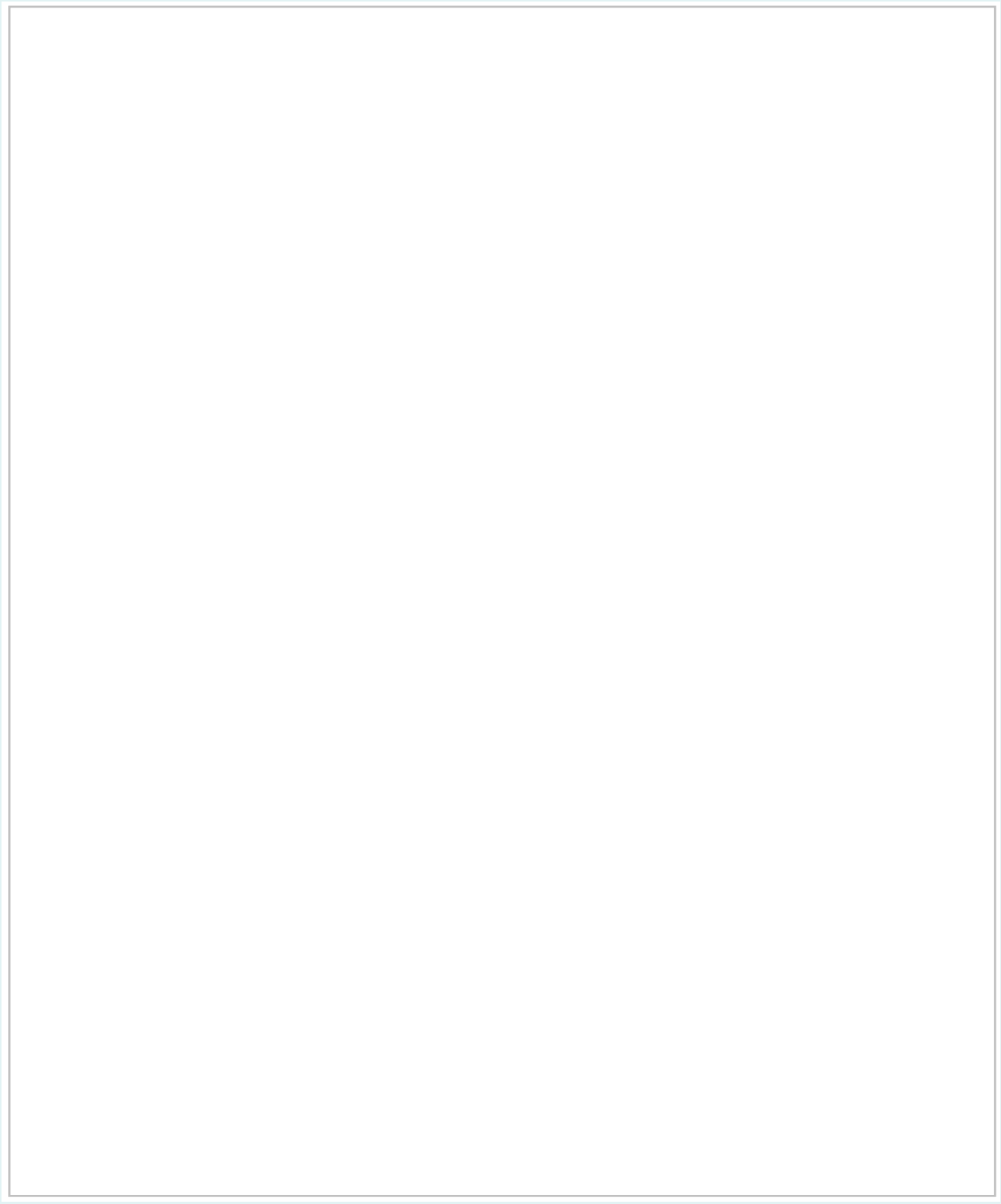
Name (please print) _____

Date _____

Note: This document does not, in any way, excuse a person from doing all that is reasonable to ensure the health and safety of themselves and others.

Farm map

Insert below or attach



Farm records

Farm records

Confined spaces

More than being in a tight place – confined spaces can be fatal

Confined spaces can be very dangerous. More than any other area of safety on dairy farms, confined spaces require the owner or person conducting the business to comply with legal regulations. Use these resources to ensure you comply.

CFA News and Media **27 November, 2013**

Heroic confined space rescue

A desperate rescue with a serious risk of four fatalities. The scene was a dairy farm where a farmer had been attending to the bad smell coming from a tank holding corn starch. It was time to dump the product to the manure pond to be diluted and pumped onto paddocks as liquid fertiliser.

He set up a ladder and climbed into the tank where he was quickly overcome by fumes.

It was a hot day, the corn starch was fermenting and producing carbon dioxide. This reduced the oxygen levels leading to asphyxiation.

The farmer's family saw him attempt to climb out of the tank before his head disappeared. One son climbed in after him and was overcome; a second son climbed in and was also overcome. A farm worker cut a hole in the side of the tank with an angle grinder before entering the tank. He was also overcome. The farmer's wife, the boys' mother, called Triple O.

Two Victoria Police officers were very fortunately only one minute away and were confronted by four people unconscious and apparently lifeless face up in the slurry.

> "Three family members injured in a shocking farm accident in Gippsland this week remained in a critical condition last night, but tales of heroism have emerged about their rescue."

The first two responding police officers did something far above and beyond their duty. With no breathing apparatus on scene and understanding that the situation was desperate, one police officer went into the tank to drag out the victims while the other held onto his belt.

All dairy farms contain a number of confined spaces

Confined spaces include:

- vats
- tank
- silos
- trenche
- mixing feed tanks.

The access to confined spaces is highly regulated. It is the responsibility of farm owners and managers to ensure that strict protocols are followed when controlling and accessing confined spaces.

Confined spaces have killed many farmers in Australia.

These tragedies have been made much worse when relatives or coworkers have attempted a rescue and are also overcome by fumes or lack of oxygen, leading to multiple fatalities.

Is the space a 'confined space': assessment questions

(Source: WorkSafe Victoria compliance code)

- ☐ 1 Is the space enclosed or partially enclosed?
- ☐ 2 Is it at normal atmospheric pressure some of the time?
- ☐ 3 Does it ever require entry (such as for maintenance, repair, cleaning)?
- ☐ 4 Does the space have a limited or restricted entry or exit?
- ☐ 5 Does the space contain at any time:
  - a harmful levels of atmospheric contaminants (e.g. gases from rotting product)? OR
  - b an unsafe oxygen level (e.g. including depleting air over time)? OR
  - c. substances that could cause engulfment (e.g. grain in a silo)?

If all five (5) boxes are ticked, it is a confined space.

Importantly, size of the space is not a critical factor – a confined space is not always a 'small' or cramped space.

In the first instance, it is preferred if plant can be selected or designed so that confined space risks do not exist, such as ensuring good access, ventilation or other features that remove the risk.

Step-by-step – Setting up safety for confined spaces on your farm

If you choose to enter confined spaces on the farm there are a number of planning steps, training and equipment that must be procured well before a space can be safely and legally entered. This checklist will help with initial planning.

1. Getting started

- [ ] **Read through this information pack carefully and watch the relevant video clips**.
- [ ] Complete the confined spaces **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of actions and **set a date** to have each action completed in the **Action Plan.**
- [ ] Read through the information quickly again.
- [ ] Pick a topic to discuss with staff or family at your nex**t workplace meeting** (you should have at least one safety topic each meeting).

2. Assessing the confined spaces risks on your farm

- [ ] Task someone with starting the Register of confined spaces for the farm. Ask them to take pictures of each possible confined space.
- [ ] Do a **risk assessment** of each structure using the Risk Assessment Guide. After you have assessed each structure, update the Register and check that no structure is missing.
- [ ] Task someone with ensuring all confined spaces have an appropriate **sign**.
- [ ] Make the necessary changes for **security and lock-outs** for each structure.
- [ ] Find out if you have **contractors** who can do the work you need in confined spaces.

3. Setting up your policy, processes and paperwork

- [ ] Set up your **Farm Policy** document for confined spaces, using the template.
- [ ] Put a copy of the Register and the Farm Policy for confined spaces with the documents you use to **induct new staff or relevant contractors.**
- [ ] Set up your **Entry Permit** using the template.
- [ ] **Work out your rescue process** for each confined space that could be entered.
- [ ] Make the necessary **structural changes** to each structure for safe use and rescues and buy the **gear needed for rescues,** such as harness or lifelines.
- [ ] Get the gear needed for **atmospheric testing** if this will be needed on your farm.
- [ ] Arrange the **training** needed and who will participate. This should be accredited training with assessment. Set up a record of induction and training.
- [ ] Do a **rehearsal rescue** for each confined space.
- [ ] Go through the arrangements you now have in place with staff or family at your next **workplace meeting.**

Sleep well – job well done.

Mandatory control of confined spaces

Under OHS law, confined spaces:

- must be identified and listed on a register
- must be marked as a CONFINED SPACE (see example decal below)
- entry must be prevented to protect workers, contractors, site visitors including children. This typically involves the use of a padlock or similar means that cannot be easily circumvented, such as with common tools.

Typical sign used to mark a confined space.
Ensure these are prominent and replaced if they fade or are obscured.

Typical dairy confined spaces

Typical dairy confined spaces to be registered, marked and access restricted except under permit:

Engaging contractors for maintenance and repairs

The entry control safety requirements involve a time and equipment overhead that leads most farmers to decide to outsource occasional maintenance work to contractors who are trained, equipped, and familiar with access requirements.

If contractors are used for confined space maintenance it is important that property managers take reasonable steps to make sure that contractors are following confined space requirements. This means seeking assurance in writing as part of any contract for the work, and keeping a copy of entry permits, which must be retained for a minimum of two years.

Farm managers must be satisfied that the contractors are suitably professional and competent, which could involve observing the typical entry processes, atmospheric monitoring and equipment associated with confined space entry, such as the presence of a dedicated spotter, recovery and respiratory equipment.

Accessing a confined space

Confined space laws mandate that the owner or person conducting the business must restrict entry to the confined space.

If entry is required in order to undertake maintenance, strict protocols must be followed, including an **entry permit, trained personnel,** and the use of **special equipment** including rescue and respiratory apparatus.

This flow chart summarises the decision making process regarding how to plan for confined space management.

- Must be identified and listed
- Must be clearly labelled
- Access must be restricted

- Silos
- Vats
- Trenches
- Tanks
- ...

Is access ever required?

YES

Are farm employees or managers required to gain entry?

YES

NO

NO

Restrict access

Securely lock any access hatch or door – do not rely on bolts, shackles, etc which could be easily circumvented.

Contractors and tradespeople must follow confined space rules. Seek assurance from contractors, in writing. Check for evidence of competence and compliance: minimum two workers, rescue and respiratory equipment, emergency planning and procedures.

On farm confined space entry: Access is strictly regulated under WHS law.

Mandatory requirements include:

(Consult training and WHS guidance in your jurisdiction for detailed requirements)

- Staff to be trained and certified in confined space entry and first aid.
- Each entry to involve a dedicated 'spotter' who is trained in first aid and confined space emergency procedures.
- A detailed permit to be issued and retained for each time entry is required.
- Continuous monitoring apparatus for oxygen levels.
- Continuous monitoring apparatus for noxious gases.
- Rescue and retrieval ropes and harnesses.
- Emergency response procedure plan in place.
- Emergency respiratory rescue equipment on hand.

Self-assessment – Add your actions to your Action Plan at the back of this folder

If you choose to enter confined spaces on the farm, there are a number of planning steps, training, and equipment that must be procured well before a space can be safely and legally entered. This checklist will help with initial planning.

For confined spaces	Unsafe and non-compliant Address these areas immediately!	Improving There is still work to be done	Safe and compliant Monitor and review to continually improve
Farm policy established (for workers and contractors)	☐ Not done	☐ Done but not available to all	☐ Up to date and available to all
Confined spaces identified and recorded in register	☐ Not done	☐ Done but not available to all	☐ Up to date and available to all
Warning signage in place	☐ None	☐ Some	☐ All
Access prohibited using locks	☐ Easily could happen	☐ Some restriction	☐ All restricted
Worker discussion and consultation	☐ Not involved	☐ Some information and discussion	☐ Fully involved in decisions and developing procedures
Safety equipment - gas testing equipment, respirators and retrieval systems	☐ None, or not in working order	☐ Some available	☐ Available, in good working order
Farm inductions for new staff	☐ Not included	☐ General warnings	☐ Each confined space and relevant safety processes identified
Accredited training for confined space entry	☐ None	☐ Some	☐ Must be completed (with evidence) before being allowed to do that work
Records of confined space training	☐ No	☐ Some	☐ Complete and up to date
Emergency plans	☐ None	☐ Only for one type of emergency	☐ In place for all emergencies

Step-by-step – Setting up safety for confined spaces on your farm

Resources in this section

- **Information** about confined spaces on dairy farms and legal obligations.
- **Safety Self-Assessment** for confined spaces.
- **Farm Policy template** for working in confined spaces
- **Register of Confined Spaces template** with Risk Assessment Guide template.
- Confined Spaces **Entry Permit template**.

Information and templates provided in this folder are also available at thepeopleindairy.org.au/farm-safety. You can edit the templates to suit your farm.

Learn more

Confined spaces – Code of Practice

Safe Work Australia:
safeworkaustralia.gov.au/doc/model-code-practice-confined-spaces

Confined spaces Compliance Code

WorkSafe Victoria Guidance:
worksafe.vic.gov.au/resources/compliance-code-confined-spaces

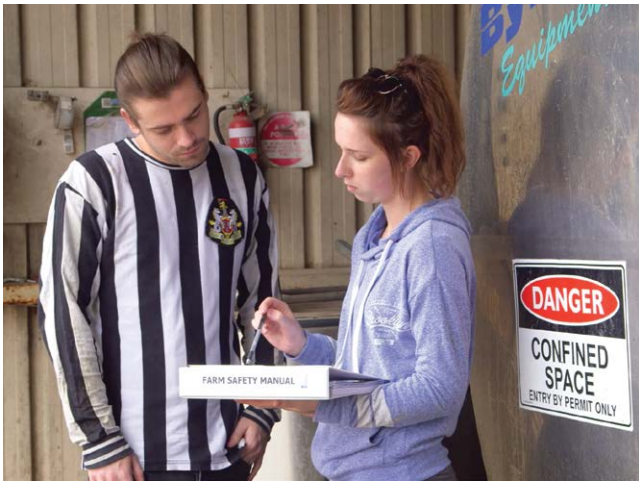
Training

Check with your Regional Development Program (RDP) about whether training in working in confined spaces is available in your region.

View short videos on:

- using entry permits
- equipment and process for atmospheric testing and monitoring
- risk assessments for structures
- example of rescue gear

thepeopleindairy.org.au/farm-safety/manual/confined-spaces



Source: Dairy Australia.

Tip

Use your Register of confined spaces in your induction process for new employees and relevant contractors.

Example: Milk vats and milk silos

All milk vats and milk silos should be managed as confined spaces. Virtually all have restricted entry, making getting in and out extremely difficult should a rescue be required. There is also the possibility of the presence of contaminants such as cleaning chemicals and some refrigerants creating a hazardous atmosphere. With some toxicities there may be no tell-tale signs and effects can be very rapid, so there could be danger to others going in to assist. Other hazards associated with work inside milk vats include working in awkward postures, heat, working at heights and being in a restrictive space (claustrophobia).

If a person collapses inside a milk vat or silo for any reason it can be very difficult to remove them, especially through a small diameter top access hatch.

Purchasing a vat that does not require entry for cleaning is the only real solution. However, mechanical failure or some other reason may still require entry.

It is preferable to use a contractor who has the relevant confined space training and equipment to maintain the vat but this does not remove your legal obligations to manage the risks associated with workers entering the confined space.

The same obligations and responsibilities apply to you whether the people involved are contractors or your direct employees. Under confined space regulations, you will need to develop a permit system that outlines the risk control measures and emergency response procedures to be undertaken before anyone enters the vat.

Ensure employees or contractors do not enter the vat without the Entry Permit being issued that outlines the risk control measures and emergency response procedures to be undertaken.

You will need a rescue plan with appropriate equipment. Vertical (top) entry vats require specialised rescue equipment. In comparison, horizontal entry vats may only require a harness and rope/recovery strap. Access hatches must be clear of roofs and walls and there must be ample space for rescue equipment should a rescue be required.

You may also need respiratory gear and a method of testing for and monitoring hazardous gases/air quality.

Best practice

1 When installing a vat, chose one that does not require entry.

2 Ensure the cooling system does not use harmful refrigerants.

3 Use non-hazardous vat cleaning chemicals where possible and always have available and follow guidelines in the Safety Data Sheet (SDS) of the chemicals in use.

4 Clean vats from outside with pressure washer/ chemicals rather than entering them.

5 Restrict access by using a suitable lock-out system.

6 Indicate with signage: 'Danger confined space: entry by permit only'.

If someone has to enter the milk vat:

7 Always undertake a risk assessment before entry into the confined space. This takes into account the particulars of the work to be done on that occasion, the chemicals to be used etc.

8 Understand and implement confined space Entry Permit requirements, this applies to all people including contractors. Ensure that 'close out' procedures are included and followed so that there is no reason (forgotten tools etc.) for re-entry once the task is complete.

9 Ensure standby arrangements and person is present.

10 Ensure suitable respiratory protective equipment is used as required by the risk assessment process.

11 Provide information, instruction and training to ensure employees are able to undertake the work without risk to health. Topics include confined space entry; rescue; Personal Protection Equipment (PPE) fitment, maintenance and use; environment testing.

12 Establish emergency rescue procedures and rehearse them. Ensure that appropriate staff have been trained in confined space rescue procedures and equipment.

13 Ensure environmental test equipment is maintained and calibrated.

Practical steps before entry

- A cold rinse should be put through the vat after the wash cycle and ventilation carried out. You may need to use mechanical ventilation to vent the space.
- Ensure the access hatch remains open and secured while you are inside to provide ongoing ventilation. To avoid accidental closure the access hatch should be fixed open.
- Turn off and lock out all power to the vat.

A mechanism must be in place to make sure that the agitator is electrically isolated prior to maintenance or cleaning. Lockout of power can be achieved by putting a padlock through the control switch or circuit break.

Confined spaces safety checklist – milk vats and silos

- ☐ Do you have a register of every vat on the farm?
- ☐ Is each vat designed to exclude the need to enter it?
- ☐ Does each vat have a lockout process and signage to indicate it is a confined space?
- ☐ Do you have a Permit System (including a risk assessment of the job to be undertaken in the confined space) for every time the vat is entered?
- ☐ Do you ALWAYS have a trained standby person present if someone enters the vat?
- ☐ Has there been training for all staff involved in the vat entry?
- ☐ Can a rescue of a person from the vat be undertaken without endangering other workers?

Learn more

A video on equipment and process for atmospheric monitoring is available at

thepeopleindairy.org.au/farm-safety/manual/confined-spaces.

Example: Grain silos and hoppers

Grain and pellet silos and hoppers may be potential confined spaces. Grain and pellet blockages can occur inside silos and hoppers and the temptation is to enter the silo to loosen the blockage, with the risk of being engulfed or trapped.

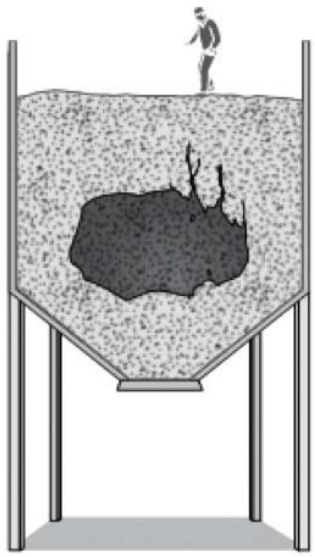
When silos empty from below, the grain or pellets can form a crust or bridge leaving a top layer in place. If a person walks on this layer or bridge they can be engulfed in grain and be asphyxiated if the bridge collapses.

Hazardous atmospheres may also occur inside silos and hoppers, including exposure to chemicals used in fumigation. To eliminate these risks, do not get into grain and pellet silos or hoppers when grain or fumigants are present.

Other hazards associated with silos include fire explosion risk (dust can be explosive especially when humidity is low), contact with moving parts such as augers, and working at heights when accessing top hatches or undertaking repairs. Working in silos may pose health issues associated with dust, microorganisms, and heat stress.

Under confined space regulations, you will need to develop a permit system that outlines the risk control measures and emergency response procedures to be undertaken before any person enters the silo. Ensure no employees or contractors enter the silo without the permit being issued.

Fit signage to warn contractors and workers *Danger 'confined space: entry by permit only'.*



Example of 'bridging' which may result in engulfment.
Source: WorkSafe Victoria, Compliance Code confined spaces, Sept 2008

Best practice

1 Purchase steep-coned silos (that improve grain flow and resist blockage) with large access hatches at the bottom.
2 Retrofit bottom hatches to silos that do not have them.
3 Undertake all jobs from outside the silo where possible.
4 Clear grain build-up from the outside through the bottom access where possible.
5 Restrict access with a suitable lock-out system.
6 Indicate with signage: 'Danger: confined space entry by permit only'

If someone has to enter the grain silo:

7 Always undertake a confined space risk assessment.
8 Understand and implement confined space entry requirements (which apply to all people including contractors).
9 Always have a responsible second person on site when anyone works inside the silo. This must be a person who can see what the person inside is doing and who is capable of implementing emergency procedures if required in case of collapse or injury within the silo.
10 Ensure suitable respiratory protective equipment is used.
11 Provide information, instruction and training to ensure workers are able to undertake the work without risk to health. Topics include confined space entry; rescue; Personal Protection Equipment (PPE) fit, maintenance and use.
12 Establish emergency rescue procedures and rehearse them. Ensure that appropriate staff have been trained in confined space rescue procedures and equipment.
13 Avoid hot work or chance of a spark around grain silos, particularly inside.

Tip

If a person is being engulfed in grain throw them a board to hold onto or lift themselves up to until a rescue can be commenced.

Practical steps before entry

- To avoid exposure to chemical additives such as phosphine, ventilate silos before entering by opening lids and, where possible, the bottom access hatch.
- Turn off and lock out power to the whole feeding system including augers when conducting silo maintenance. An isolation switch with tag and lockout prevents another person inadvertently switching on the feeding system when someone else is working on it or inside the silo.
- Make sure that sparks and flames are kept away from grain storage areas to avoid a potential dust explosion or fire. This is a 'No Smoking' zone.
- When fumigating silos refer to the silo manufacturer's guidelines and chemical Safety Data Sheet (SDS) for application guidelines and re-entry times.

Confined Spaces Safety Checklist – Grain and pellet silos and hoppers

- [ ] Do you have a register of every silo and hopper on the farm?
- [ ] Is each silo and hopper designed to exclude the need to enter it?
- [ ] Does each silo and hopper have a lockout arrangement and signage to indicate it is a confined space?
- [ ] Do you have a permit system (including a risk assessment of the job to be undertaken in the confined space) for every time the silo or hopper is entered?
- [ ] Do you ALWAYS have a trained standby person present if someone enters the silo or hopper?
- [ ] Has there been training for all staff involved in the confined space entry?
- [ ] Can a rescue of a person from the space be undertaken without endangering other workers?

Example: Tanks or pits containing organic material – including feed mixer wagons

Any tanks or pits that may contain a hazardous atmosphere can be confined spaces. These include water tanks, effluent pits (including some open effluent pits depending on the design), wells, spray tanks or feed mixer wagons. These may contain decomposing or fermenting organic material that produces poisonous gases or gases such as methane or carbon dioxide that displace oxygen and expose workers to asphyxiation.

- Fermentation of products such as corn starch, can produce carbon dioxide which is heavier than air and can displace oxygen increasing the risk of asphyxiation.
- Methane is a colourless, odourless, flammable gas that can be produced by decomposing organic material. It is not toxic but it can displace oxygen increasing the risk of asphyxiation. Being flammable increases the risk of explosion.
- Some breakdown of organic material can produce the gas hydrogen sulphide commonly known as rotten egg gas. Hydrogen sulphide is poisonous, flammable and potentially explosive.
- Ammonia can be produced in some cleaning processes. Ammonia has a distinctive odour and is poisonous at relatively low levels.
- Carbon monoxide is produced if using petrol or diesel (combustion) motors. Carbon monoxide is an odourless gas which causes asphyxiation by displacing oxygen from red blood cells.

It is preferable to use a contractor who has the relevant equipment to pump residual organic material out of tanks without the need to enter the tank.

Tip

Do not pump out tanks by placing combustion engine driven pumps inside the tank as deadly carbon monoxide gas will be present.

Best practice

1 Never get into tanks containing organic material.

2 Fit locks to any lids or hatches to prevent entry. Fence off or barricade to prevent child or accidental access.

3 Indicate with signage: 'Danger: confined space entry by permit only'.

If you have to enter a tank that has contained organic material, a confined space risk assessment needs to be undertaken by a competent person, e.g. a confined space trained contractor, who can undertake atmospheric testing and monitoring with a suitable calibrated gas detector to determine whether atmospheric contaminants are present and that the oxygen is at a safe level before any work is undertaken.

A confined space permit will need to be established in conjunction with the qualified contractor.

Confined Spaces Safety Checklist – Tanks, pit or wagons containing organic material

- ☐ Do you have a register of every tank, effluent pit, spray vessel and feed mixer wagon on the farm?
- ☐ Has each structure been assessed to check if it would be considered a confined space?
- ☐ Is each structure designed to exclude the need to enter it at any time?
- ☐ Is each structure designed to prevent accidental entry?
- ☐ Does each tank, pit and wagon have a lockout arrangement and signage to indicate it is a confined space?
- ☐ Do you engage contractors to clean tanks when required?
- ☐ Do you ALWAYS have a trained standby person present if someone enters the confined space?

Farm policy on safety in confined spaces

Farm	
Purpose	This policy is in place to ensure that staff and contractors work safely within confined spaces on our farm.
Who does it apply to?	Trained managers, contractors and workers. Children and/or visitors are prohibited from entering confined spaces.
Consequences of not complying with this policy	Failure to follow the processes outlined in this policy may lead to disciplinary action, dismissal or termination of contract. If any circumstance arises that would make it difficult to comply with this policy, immediately contact:
Policy was last reviewed	**Date:**

Confined spaces can be life-threatening hazards. They occur in circumstances where there is:

- restricted entry or exit, and/or
- hazardous atmosphere – e.g. harmful chemical or contaminant or unsafe oxygen level, and/or
- risk of engulfment – e.g. by grain or pellets or liquid.

On this farm, we are committed to managing the process around trained personnel safely entering a structure or space that has been designated as a confined space. These are listed in the farm 'Register of confined spaces' which is located at:

- < locations >

_____

_____

All confined spaces on this farm have labels (Danger confined space entry by permit only.)

Do not enter into a confined space unless the following 4 points have been satisfied:

1 **A confined spaces Entry Permit has been completed by < the manager >**

_____

_____

2 **The conditions of the Entry Permit are followed exactly (only the job and time authorised)**

3 **The person intending to enter has evidence of confined space training**

4 **There is a trained stand-by person in attendance at the point of entry for the whole time that the person is inside the confined space.**

Staff member/contractor acknowledgement

I have received a copy of this policy and have read understood and agree to comply with it.

Name:

Signature: Date:

Remarks or comments:

*** File this document in the relevant farm folder and retain for a minimum of two years. ****

This template is available at **thepeopleindairy.org.au/farm-safety/manual/confined-spaces.**

Register and Risk Assessment Guide

Print and complete for each confined spaces risk.

Name of structure space (and unique ID):

Location of structure/space:

Is this a confined space (with respect to the regulation criteria)?

	Yes	No	
Is the space enclosed or partially enclosed?	☐	☐	
Does the space have a limited or restricted means of entry and exit for personnel?	☐	☐	
Is the space likely to be entered by a person for any reason? (e.g. inspection, maintenance, cleaning)	☐	☐	
Is the space designed or intended to be, at normal atmospheric pressure while any person is in the space?	☐	☐	
Does the space contain, or could it contain: • Harmful airborne or flammable contaminants (e.g. chemical fumes, vapours, gases) • An unsafe oxygen level (e.g. too low or too high) • Substances that could cause engulfment	☐	☐	

If Yes to **any** of these questions, include the structure/space in your Register of confined spaces and complete the Risk Assessment Guide on the next page.

Risk Assessment Guide

(To be used for each confined spaces risk)

Hazard	Present Yes	Present No	Details	Action/Controls
Entry/Exit Is the space likely or intended to be entered (e.g. inspection, cleaning, maintenance)?	☐	☐		
Atmosphere Is there a chance that the atmospheric pressure could change to an unsafe level?	☐	☐		
Before entry, is there any risk that the atmosphere may be unsafe (e.g. refrigerant gases; cleaning chemicals; vapours from fumigants, fuel, decomposing material; reduced oxygen; explosive vapours)?	☐	☐		
Once inside the space, is there a risk of any harmful contaminant entering or being created in the space (e.g. hazardous cleaning chemicals, carbon monoxide)?	☐	☐		
Could any process occurring inside cause oxygen deficiency?	☐	☐		
Contents Is any material present in the space that could result in engulfment (e.g. grain, pellets)?	☐	☐		
Could any other substance be introduced into the space while it is occupied (e.g. water, oil, fuel)?	☐	☐		
Lighting Could there be insufficient light?	☐	☐		
Are there any hazards associated with lighting in the space?	☐	☐		
Electricity Are any electrical hazards present?	☐	☐		

Hazard	Present Yes	No	Details	Action/Controls
Entanglement Is there a risk of entanglement with any moving parts in the space (e.g. agitators, augers)?	☐	☐		
Communication Could the 'standby' person have any difficulty communicating with a person inside?	☐	☐		
Personal protective equipment (PPE) Is PPE required to enter the space (e.g. breathing apparatus)?	☐	☐		
Is PPE required to undertake the work in the space (e.g. chemical or hot water use)?	☐	☐		

Emergency planning for this confined space

Description of the features of the space (e.g. type of access, conditions inside the space)	Description of emergency process when required (e.g. emergency services, elevated platform, mechanical ventilation)	Description of emergency equipment required for entry (e.g. lifting equipment, torch)

*** OHS law requires filing of this completed form in the relevant farm folder and retain for two years. ****

Entry permit

*** Insert Manager's name and contact details before proceeding ****

Emergency contact details	
Emergency services (e.g. 000):	
Farm Manager:	Ph:

The employee, contractor or their supervisor is responsible for completing this permit.

This permit is valid only for the date and time specified. Only the listed work may be carried out.

The Farm Manager must ensure the permit is satisfactorily completed prior to the commencement of entry. When the confined space entry is complete or this permit expires, the manager must sign off the permit.

Part A: Job details

Location of the task:		
Description of the proposed work to be carried out:		
Proposed timing – Date of entry:	Time of entry: From:	To:

		Yes	No
Name of person entering confined space:	Is this person a contractor?	☐	☐
	Has this person been trained in confined space entry and ID/licence seen/confirmed?	☐	☐
Name of stand-by person:	Has this person been trained in confined space entry and ID/licence seen/confirmed?	☐	☐

Entry permit continued

Part B: Safety Controls

*** Comments are required if "YES" is ticked ***

Requirement	Yes	No	Comments/Control measures used
Stand-by person	☐	☐	
Personal Protective Equipment (PPE)	☐	☐	
Non-entry rescue equipment	☐	☐	
Continuous air monitoring	☐	☐	
Respiratory protection	☐	☐	
Ventilation	☐	☐	
Fire extinguisher and 1st Aid kit	☐	☐	
Isolation of work area	☐	☐	
Elimination of all ignition sources (and no smoking)	☐	☐	
Lockout/tag out of services	☐	☐	
Other	☐	☐	

If chemical is being used, please provide details	
What chemical is to be used for this job?	
Has the user been shown how to use the chemical?	
Has the Safety Data Sheet (SDS) been checked?	
Is the chemical safe to use in the confined space?	
Is there a spill kit available and is it close to the job?	
What PPE is required for this chemical?	

Entry permit continued

Atmospheric testing			
Oxygen	%	Flammable gases	% LEL#
Other gases	%LEL	Other gases	% LEL
Other Airborne Contaminants			

 # Lower explosive limit – lowest concentration (percentage) of a gas or vapour in air capable of producing a flash of fire in presence of an ignition source (arc, flame, heat).

Rescue procedure, please provide details:

Part C: Authority to enter – Farm Manager

The control measures and precautions appropriate for the safe entry and execution of the work in this confined space have been implemented. Personnel required to work in and around the confined space have been advised of, and understand the requirement of this permit.

Permit validity:	**Date of entry:**	**Time of entry:** From:	To:
Authorising Farm Representative:			
Signature:			
		Date:	**Time:**

Entry permit continued

Part D: Log in/out

Name	Date	Time in	Time out

Part E: Close out – Farm Manager

The confined space site has been returned to a safe and usable condition. All tools, materials and equipment have been removed from the confined space and no further entry is required.

Authorising Farm Representative:

Signature:

Date: **Time:**

Remarks or comments:

*** File the completed form in the relevant farm folder and retain for two years. ****

Farm records

Farm records

Working at heights

Fall prevention

Working at heights is a risky business on farms.

Falls from heights can cause serious injuries, even when they are from less than two metres.

Legal regulations require that any work undertaken where a fall from one level to another is a possibility, must have the risks controlled. As the owner or person conducting the business on the farm, you must comply with these regulations. Use these resources to ensure you cover your legal responsibilities.

OHS News **24 August, 2017**

NSW man injured in roof fall

Emergency services were called to a property in south-eastern New South Wales after reports of a man falling from a roof.

The man in his 70s fell about three metres while working on a roof about 10 am on Tuesday morning.

He sustained head and chest injuries and was treated at the scene by ambulance paramedics before being flown to a Sydney hospital in a stable condition.

Working at heights is a high-risk activity and a leading cause of serious injury in Australia.

According to Safe Work Australia, 359 workers were killed following a fall from a height between 1 January 2003 and 31 December 2015. Half of these fatalities involved falling three metres or less.

The Weekly Times **December 14, 2016**

Farm deaths in Victoria prompt safety review

NINE Victorian farmers have died at work this year.

All nine were men, with all but two aged over 50, and most were working alone.

Across Australia, 55 farmers have been killed this year, with 390 deaths since 2010, according to the Australian Centre for Agricultural Health and Safety.

The rising death toll has sparked calls for farmers to let family, friends or neighbours know where they are when working alone and when they will return.

John Feldtmann, 59, died falling off a ladder while repairing the gutters on a farm shed at Major Plains, 40km east of Shepparton.

WorkSafe executive director of health and safety Marnie Williams said while working alone was often unavoidable, farmers could reduce the risks by planning ahead and notifying family members or neighbours regularly so, if there was an emergency, people knew where they were.

Step-by-step – Preventing falls from heights on your farm

Discuss with your family and workers where you are likely to be working at heights on the farm and the reasons for doing so. This may require a walk around the various infrastructure on the farm. The focus will most likely be around the dairy, feeding system, yards, machinery, silos and sheds. Many of the changes needed to eliminate or control the risks may be easy and inexpensive. In the longer term, it might mean choosing a safer option when infrastructure is replaced.

1. Getting started

- [ ] **Read through this information pack** carefully.
- [ ] Complete the working at heights **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of things to do and **set a date** to have each thing completed in the **Action Plan.**
- [ ] Read through the information quickly again.
- [ ] Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).

2. Assessing the risks around working at heights on your farm

- [ ] Task someone with identifying all the locations where work is done at heights on the farm. Ask them to take pictures of each possible location.
- [ ] Do a **risk assessment** of each location or structure using the Risk Assessment Guide.

3. Eliminating or controlling the risks

- [ ] Identify ways of doing the task from ground level.
- [ ] Make the necessary changes for **improved safety,** so that unauthorised persons (including children) are prevented from entering locations where falls could occur.
- [ ] Find out if you have **contractors** who are equipped and skilled to do the work at heights.
- [ ] Have the necessary **structural changes** to each structure made by a competent person and buy any **gear needed** such as portable platforms or fall arrest systems, including harnesses.
- [ ] Arrange the **training** needed and who will participate. Set up a record of induction and training.
- [ ] Go through the arrangements you now have in place with workers or family at your next **workplace meeting**.

Sleep well – job well done

Resources in this section

- **Information** about working at heights on dairy farms and legal obligations.
- **Safety Self-Assessment** for working at heights.
- **Risk Assessment Guide template.**

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety** You can edit the templates to suit your farm.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For working at heights	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Locations/structures identified and risk assessments conducted (for workers and contractors). Check: vats, dairy area, mezzanines, grain silos, yards, ramps, tanks, roofs, mobile plant, trucks, other	☐ Not done	☐ Done but not available to all	☐ Up-to-date and available to all
Access by children and unauthorised people	☐ Easily could happen	☐ Some restriction	☐ All restricted
Worker information and feedback about risks of falls	☐ Not involved	☐ Some information and discussion	☐ Fully involved in decisions and developing procedures
Work procedures for relevant tasks	☐ Not developed	☐ Limited development and review	☐ All developed and regularly reviewed
Implementation of work procedures	☐ Never	☐ Sometimes	☐ Always
Safety equipment – portable work platforms, fall arrest systems – harnesses (if required)	☐ None, or not in working order	☐ Some available	☐ Available, in good working order
Supervision and observer to ensure safety during work	☐ None	☐ Sometimes	☐ Always
Farm inductions for new staff and for existing staff when introducing new equipment and practices	☐ Not included	☐ General warnings	☐ Each location/ structure and relevant safety processes identified
Accredited training and licences (where relevant) for use of elevated work platforms	☐ None	☐ Some	☐ Must be completed (with evidence) before being allowed to do that work
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up to date
Reporting accidents and incidents	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on, including notifications required by law
Emergency plans	☐ None	☐ Only for one type of emergency	☐ In place for all emergencies

Step-by-step – Preventing falls from heights on your farm

Falls from height can occur wherever there is more than one level – for example, when someone is on a structure, piece of machinery, set of rails or ladder above ground, or working at ground level beside an exposed edge such as a pit. Serious injuries and fatalities can occur from falls. In addition, people underneath may be at risk if tools, materials and equipment are not adequately secured.

By law, the person conducting the business in any workplace where a fall from one level to another is a possibility, has work health and safety obligations to manage all hazards and associated risks.

On dairy farms, examples of work practices that could lead to serious falls from heights include:

- working on or near fragile surfaces such as badly rusted corrugated iron, cleaning spouting, cement sheeting or fibreglass roofs and skylights
- working on mezzanine floors
- climbing on rails and pipelines to service equipment in the dairy
- accessing feed heads, sensors and internal sections of rotary dairies
- climbing over dairy yard fencing
- using inadequate vet platforms in rotary dairies or walkways adjacent to cattle loading ramps
- maintaining machinery such as windmills, feed mixers, big square balers, headers and seeders
- climbing fixed ladders on silos or tanks
- the unsafe and illegal practice of working from the bucket on a front-end loader or tractor, or from a pallet lifted by a forklift.
- using unsecured ladders on slippery or uneven surfaces, or using ladders inappropriately, for example working above the recommended level or load rating
- working on an exposed edge – next to a pit, sump or ledge – e.g. a vehicle service pit
- exiting tractors the wrong way (the a correct way is by facing the tractor and using its handrails).

Wherever possible, set up so that work can be done from ground level. For example, have silos with remote ground opening lids and fumigation systems. Some easy changes can be made, like having long-handled brushes for cleaning windscreens on tractors, long-handled globe removers and paint rollers.

WHS regulations require you to assess and manage the risks with equipment and safe systems of work, for example:

- identify reasonably foreseeable hazards that could give rise to the risk of falling.
- eliminate the need to work at heights wherever possible.
- if it is not reasonably practicable to eliminate the risk, minimise it by implementing control measures.
- review and revise risk control measures to ensure they are effective.
- consult, so far as is reasonably practicable, with workers who are (or are likely to be) directly affected by working at heights. By law, you are responsible for all people involved – your staff AND contractors.

Where work has to be done at heights, use solid constructions such as fixed (rather than portable) ladders and steps, or portable step platforms that conform to Australian standards. Ensure that fall prevention devices such as ladder cages and handrails are present and make sure that equipment is in good working order and used appropriately. If a ladder is above six metres e.g. grain silos, it requires a landing and cage or other falls protection system in place.

Never work alone when working at heights.

Learn more

Managing the risk of falls at workplaces
Safe Work Australia Code of Practice:

safeworkaustralia.gov.au/doc/model-code-practice-managing-risk-falls-workplaces

Always use purpose-built work platforms, such as cherry pickers or elevated work platforms, and not inappropriate equipment such as front-end loader buckets. Some powered work platforms may require licenses. Rated and purpose-built work lift boxes can only be used with specific industrial forklifts and not on the forks of a front end loader. A work lift box must be secured to the industrial fork lift truck before use.

Scaffolding and harnesses should be used when constructing or maintaining roofs. Specialised training may be required for working at heights, particularly if using harnesses and fall arrest systems. (And remember a trained second person must be present and have a rescue plan in place in case of a fall to retrieve the person who has fallen).

It is important to ensure that unauthorised persons (including children) are prevented from accessing locations where falls could occur, for example by having guards or locked covers on fixed ladders.

Temporary holes, trenches or pits should be covered or isolated with barriers.

When doing your risk assessments, also remember that some structures may be confined spaces and you should check for overhead power hazards too.

By law

Where a fall-arrest system is used to control risk, emergency and rescue procedures must be established and tested to ensure they are effective. Workers must be provided with suitable and adequate information, instruction and training in relation to the emergency procedures.

As part of emergency procedures first aid equipment and facilities must be provided and workers must be trained to administer first aid or have access to persons who are trained in first aid.

Learn more

Selection and use of portable ladders

worksafe.vic.gov.au/resources/guidance-note-prevention-falls-construction

Work platforms and boxes used in conjunction with industrial fork lifts

safeworkaustralia.gov.au/collection/industrial-lift-trucks-guidance-material

Elevated work platforms

worksafe.vic.gov.au/elevating-work-platforms

Tip

1. Always use a platform rather than a ladder if the tools you are using require two hands.
2. **Portable ladders – use only as a last resort** When purchasing portable ladders ensure they are stamped with compliance to the Australian standard (AS 1892). Dispose of ladders that are not made to the standard with the suitable Industrial rating for the task to be performed.
3. Instruct staff in safe use of portable ladders, including positioning, securing, load limits and always maintaining three points of contact. Store ladders horizontally.
4. **Non-conductive ladders should be used for electrical work.**

Tip

Fall arrest systems including harnesses should only to be used if other controls cannot be implemented or to support other controls. Professional safety advice should be sought on selection, installation, use, maintenance and storage of fall arrest systems including harnesses. Training in correct use must also be provided.

Milk vats and silos, dairy fittings, grain silos, tanks and roofs

Best practice

1 When installing a vat or silo, choose one where all work can be done from the ground. Some modifications to existing structures can decrease the need to work from heights. Consider options for:
   - bottom access
   - remote ground opening grain silo lids
   - grain/feed level sight glasses in silos
   - ground level grain fumigation systems.

Where work has to be done on a vat, silo, tank, equipment or machinery out of normal reach in the dairy, roof, or mobile plant such as feed mixers, balers or headers:

2 Fit steps and handrails. Portable and fixed steps with platforms and handrails can be used for dairy, machinery and building maintenance, accessing tanks and vats. These are available in various sizes.

3 Install hand rails and steps that meet Australian Standards AS1657 to access mezzanine floors or raised platforms. Provide edge protection with fixed barriers.

4 Undertake construction and maintenance on shed and house roofs should be undertaken with fall protection including scaffold rails and harnesses.

5 Provide safety mesh underneath the skylights, or galvanised safety mesh if above the skylights.

6 Install fixed rated anchor points for lanyards, where frequent access at height is required.

7 Some silos come without ladders. When maintenance is required, use a cherry picker or elevated work platform (EWP) - do not use portable ladders. Only trained and competent workers should use EWPs or cherry pickers.

8 Never work at heights alone.

9 Always consider the controls required when working inside or alongside confined spaces e.g. hazardous atmosphere/toxic gasses.

When buying plant, equipment etc, try to eliminate or minimise the need for working at height.

Tips

- New sheds or dairies must be constructed to comply with the National Construction Code of Australia, especially in relation to stairs and mezzanine floors.
- Building contractors must also comply with safe work practices, for example ensuring scaffolding or edge protection is used on roofs.

Silos showing caged ladders and sight glasses.
Source: ***Dairy Australia***

Learn more

Grain handling safety – Farmsafe Australia

keo-cms.appspot.com.storage.googleapis.com/sites/farmsafe/assets/323ce82e-4974-4eef-b4d1-216703627b52/Grain%20Handling%20Safety%20Guide.pdf

General work on roofs – WorkSafe Victoria

content.api.worksafe.vic.gov.au/sites/default/files/2018-06/ISBN-Falls-prevention-guide-2017-06.pdf

Falls involved in cattle handling and transport

Falls can occur when loading and unloading cattle and involve the on-farm yards (particularly the loading ramp), and the tops, sides and cabins of livestock trucks. They can occur at any height. Your responsibility applies to all workers including cartage contractors while on your farm.

The risk of falls and being crushed by cattle when loading and unloading cattle can be significantly reduced with good yard and truck design or renovation. When purchasing a truck consider access to the cabin and to the stock crate as part of the design that will reduce the risk of falls.

Best practice

1 Undertake work from the ground or platforms or walkways with hand and guard rails.

Practical steps to reduce the risk of falls when loading and inspecting cattle include:

2 Design loading ramps with adjacent walkways so there is no need to either follow the cattle up the ramp (reducing potential livestock crush injuries) or climb the loading ramp. The design should enable access to the sliding gate of the truck and access to the truck.

3 Reduce time spent on the top or the sides of the stock crate of the truck. Work can be done safely from inside the crate where there is a constant barrier between the worker and the cattle.

4 Design cabin access to reduce the risk of falls, by ensuring:

- steps are flat and include non-slip materials
- steps have sufficient tread to support most of the foot
- the distances between steps are even
- there are enough handholds for the person to always have three points of contact when getting in and out of the cabin.

5 Ensure cartage contractors have trucks and work practices that reduce the risk of falls and being crushed by cattle when working on your farm.

6 Avoid loading and unloading cattle on your own.

Tip

Have sufficient lighting for night work (there will be a late delivery or pick up sometime).

Loading ramp with walkway and top gate to truck.
Source: Andrew Sullivan

Learn more

Prevention of falls in the transport of livestock

worksafe.vic.gov.au/resources/archived-prevention-falls-transport-livestock

Loading ramps

WorkSafe Victoria have developed a resource guide around the assessment of existing livestock loading facilities, as well as safe construction of new cattle yards

worksafe.vic.gov.au/safe-cattle-yards-livestock-loading-and-unloading

Working at heights Safety Checklist – Cattle handling and transport

- ☐ Are loading ramps designed to eliminate climbing, allow work from outside of the ramp and provide access to the rear of the truck?
- ☐ Is the stock crate access designed to reduce the risk of falls and crushing by cattle?
- ☐ Is cabin access designed to reduce the risk of falls?

Register and Risk Assessment Guide

Print off and complete copy of this form for each working at height risk.

Person doing assessment:	**Date:**
People consulted:	

Notes: Some structures may also require assessment as confined spaces. Check overhead power hazards too.

Is this a structure or equipment where a fall could occur?

☐	Grain silo	☐	Mobile plant
☐	Milk vat or silo	☐	Pit, hole or trench
☐	Structure or machine in dairy	☐	Windmill or water tank
☐	Mezzanine floor	☐	Fuel tank
☐	Roof	☐	Yards, ramps or vet platform
☐	Mobile ladder or platform		
☐	Other (specify):		

Name of this structure/equipment:

Location of this structure/equipment:

Falls risk assessment guide

(To be used for each working at heights risk)

Hazard	Present Yes	Present No	Details	Action/Controls
Restricted access Could this structure or equipment be accessed by unauthorised people (including children)?	☐	☐		
Tasks to be done Is there anything that can be done to eliminate the need to work at height?	☐	☐		
Fixed steps, ladders and platforms Are there any deficiencies with fixed steps, ladders or platforms associated with the structure or equipment? (Check: Australian Standards AS 1657 requirement for hand rails, toe boards and cages where relevant)	☐	☐		
Work positioning Do you currently use portable ladders when portable steps or an Elevated Work Platform (EWP) would be safer?	☐	☐		
Are there any gaps in your safe operating procedure for the use of an EWP? (Check: it should include instruction and training for workers)	☐	☐		
Portable ladders Are any portable ladders not made to the Australian Standard AS 1892?	☐	☐		
Do workers need more instruction in the safe use of portable ladders, including secure anchorage?	☐	☐		
Fall arrest system If a fall arrest system is used on this structure (e.g. anchorage points, lanyards, harness), are there any hazards associated with its use? (Check: it should have been installed/checked by a competent safety professional)	☐	☐		

Hazard	Present Yes	No	Details	Action/Controls
Do workers need further training in the safe use of the fall arrest system?	☐	☐		
Are there any gaps in your safe work procedure for the use of the fall arrest system? (Check: it should include supervision, rescue plans, rescue training, first aid kits and first aid training)	☐	☐		
Personal protective equipment (PPE) Is PPE required for work on this structure/ equipment (e.g. non-slip footwear, helmet)?	☐	☐		
Assessment of other hazards for this structure e.g. Confined space?	☐	☐		

Emergency planning for working at heights on this structure

Provide details of the rescue plan (and trained rescuers) to be used when working at heights occurs.

Description of the features of the structure (e.g. type of work to be done at heights)	Description of emergency process when required (e.g. emergency services)	Description of emergency equipment required

Use this information to assist supervision and training so you can more safely manage all working at heights tasks under your control

*****File this completed form in the relevant farm folder and review it in two years or sooner if an incident occurs or new information becomes available*****

Farm records

Farm records

Power and electrical

Amp up on safety measures – electrical hazards can be fatal

Electrical hazards are common on dairy farms because electrical equipment is often used in hostile operating environments (where there is moisture, vibration, dust, heat, corrosive chemicals or physical damage) and because powerlines are likely to be located near busy dairy and feed storage areas.

Electrocution often results in death or serious injury. Electric shocks may also lead to injuries or illnesses such as falls (e.g. from ladders or platforms), muscle spasms, palpitations, nausea, vomiting, collapse and unconsciousness. Arcing, explosion or fire due to electric faults can also cause burns and illness or death from release of toxic gases.

Regulations require employers to manage electrical risks by ensuring all electrical installation and equipment are safe to use. Even if contractors or workers supply their own electrical equipment, the dairy farm manager has a responsibility to ensure that it is safe.

Use these resources to ensure that you comply with these requirements.

WorkSafe Victoria, Safety Solutions **11 January, 2016**

Workplace fatalities "devastating start" to 2016

The tragic deaths of two young men at work on 5 and 6 January are a horrible reminder to all about why workplace safety needs to be everyone's priority, said WorkSafe Victoria Executive Director of Health and Safety Marnie Williams.

"This is a truly devastating start to 2016 and the thoughts of all WorkSafe staff are with the families of these two young men during this difficult time," said Williams.

"In a terrible coincidence, both men were electrocuted – the third and fourth workers to have been electrocuted in Victoria in the past nine weeks."

A 24-year-old electrician was working on the rooftop of a local shopping centre in the Melbourne suburb of Dallas on 5 January when he suffered a severe electric shock and died at the scene. He leaves behind a wife and five-month-old daughter.

The second victim, a 21-year-old dairy farmer, who died from electrocution at a farm in northern Victoria, was working on a submersible pump in a drainage pit when he also died from electric shock.

"Death at work is never acceptable. Everyone has a part to play in making the workplace safe, and every single worker has the right to return home safe at the end of the day," said Williams.

"No family should go through the suffering that two Victorian families are now going through today.

"So make workplace safety your priority in 2016."

Worksafe Victoria is currently investigating both incidents.

"Everyone has a part to play in making the workplace safe, and every single worker has the right to return home safe at the end of the day."

Step-by-step – safety for power and electrical equipment on your farm

Consider all the places where power is supplied and used on your farm. Your focus will most likely be around the dairy and workshop, but other powered locations such as yards, sheds, pumps and houses should be considered too.

Many of the changes required to eliminate or control the risks may be easy and inexpensive. In the longer-term, it might mean making structural changes or choosing a different option when infrastructure is built or replaced.

Use this list to walk through the steps to prevent injuries from power or electrical hazards on your farm.

Resources in this section

- **Information** about power and electrical on dairy farms and legal obligations.
- **Safety Self-Assessment** for power and electrical.

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety.** You can edit the templates to suit your farm.

1. Getting started

- [ ] **Read through this information pack** carefully and watch the relevant YouTube clips.
- [ ] Complete the power and electrical **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of things to do and **set a date** to have each thing completed in the **Action Plan.**
- [ ] Read through the information quickly again.
- [ ] Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).

2. Assessing the risks around power and electrical equipment on your farm

- [ ] Task someone with **identifying all the locations where power is supplied or used** on the farm and making a list of the equipment involved.
- [ ] Do a **risk assessment** of each location or equipment.
- [ ] Review the **location of powerlines** on your property and assess any hazards associated with them.

3. Eliminating or controlling the risks

- [ ] **Make the necessary changes** to eliminate or control the hazards you have identified.
- [ ] Arrange any **training** needed and who will participate.
- [ ] Include safe use of electrical equipment and leads in your induction and refresher training process. Set up a record of **induction and training**.
- [ ] Go through the arrangements you now have in place with workers or family at your next **workplace meeting**.

Sleep well – job well done.

Exposure to electrical hazards commonly occurs through:

- damaged installations
- poorly maintained fixed and portable electrical leads and equipment
- repairs and installations done by unqualified people
- failure to isolate power when undertaking general maintenance
- using electrical equipment in wet areas
- overloading electrical circuits
- safety switches not being fitted to power outlets
- contact or working close to overhead power lines
- contact with underground power.

Electric shocks may be received by direct contact, indirect contact or by electricity arcing across space. Indirect contact occurs where a conductive part that is not normally energised (e.g. fences or steel rails in the dairy) becomes energised due to a fault.

Fires can result from electrical faults. Toxic gases and contaminants may be released by arcing of electrical equipment.

By law, the person conducting the business in any workplace has work health and safety obligations to manage all electricity hazards and the risks that may arise.

WHS regulations require you to:

- ensure electrical work is undertaken by a licensed or registered electrical worker
- ensure before electrical work is carried out on electrical equipment, the equipment is tested by a competent person to determine whether or not it is energised
- ensure any unsafe electrical equipment is disconnected (or isolated) from its electricity supply and once disconnected:
  - it is not reconnected until it is repaired or tested and found to be safe
  - it is replaced, or
  - it is permanently removed from use
- Make sure that electrical equipment is regularly inspected, tested and tagged by a competent person if the electrical equipment:
  - is supplied with electricity through an electrical socket outlet ('plug in' equipment), and
  - is used in an environment in which it is exposed to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span, e.g. conditions such as exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust
- keep a record of the testing until the electrical equipment is next tested, permanently removed from the workplace or disposed
- ensure that any electrical risk associated with the supply of electricity to 'plug in' electrical equipment is minimised by the use of an appropriate Residual Current Device (RCD) that is tested and tagged by a competent person.

Electrical work on energised equipment must be avoided and where circumstance require this then the person conducting the business must ensure the licenced electrician meets specific regulatory requirements including the conduct and documentation of a risk assessment and a documented safe work method statement for the task. For more information see the *Code of practice for Managing electrical risks in the workplace.*

Self-assessment – Add your actions to your Action Plan at the back of this folder

For power and electrical	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Electrical work is carried out by a licensed and registered electrician	☐ Sometimes	☐ Mostly	☐ Always
Electrical installations and equipment have been inspected (and portable equipment have a current test tag attached)	☐ Not done	☐ Some	☐ All
Residual Current Devices are in place for power outlets and have current test tag	☐ None	☐ Some	☐ All
Lock-out of electrical equipment occurs when doing maintenance	☐ Never	☐ Sometimes	☐ Always
Contact with overhead or underground powerlines	☐ Easily could happen	☐ Mostly restricted	☐ All restricted – underground and marked, or routed away from traffic
Farm map with powerlines and switchboards	☐ None marked	☐ Some, may not be up to date	☐ All marked and up to date
Location, voltage and work zones for overhead lines on or adjacent to the farm conveyed to workers	☐ None known	☐ Some known, may not be up to date	☐ All known and up to date
Worker information and feedback about electrical safety	☐ Not involved	☐ Some information and discussion	☐ Fully involved in decisions and developing procedures
Work procedures for relevant tasks using equipment or working near powerlines both above and below ground	☐ Not developed	☐ Limited development and review	☐ All developed and regularly reviewed
Implementation of work procedures	☐ Never	☐ Sometimes	☐ Always
Farm inductions for new workers and for existing workers when introducing new equipment and practices	☐ Not included	☐ General warnings	☐ Each piece of electrical equipment and relevant safety processes identified
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up to date
Reporting accidents and incidents	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Follow-up to incidents	☐ None	☐ Limited review and action	☐ All incidents investigated and issues acted on, including notifications required by law
Emergency plans for electrical incidents	☐ None	☐ Only for one type of emergency	☐ In place for all emergencies, includes strategic placement of dry powder extinguishers

Step-by-step – Safety for power and electrical equipment on your farm

Emergency response plans should include:

- breaking contact with the electric source if possible
- isolating the electricity supply
- keeping people at least 8 metres from the machinery or vehicle
- ensuring unauthorised or unequipped people do not attempt rescue until the electricity is isolated and the site is made safe
- having communication systems at hand
- having trained first aiders
- having up-to-date first aid kits

Remember, if a vehicle or mobile machinery is in contact with electric lines:

- the vehicle or machinery operator should remain in the cab until the power is isolated unless there is a visible sign of fire.
- if leaving the cab, occupants should jump clear of the machine or vehicle without touching the vehicle and ground at the same time.
- an invisible and radiating electrical field can be created around the machine that can result in electric shock and it is recommended to hop or shuffle until 8 metres clear of the machine.
- The tyres of the affected vehicle may explode or catch fire up to 24 hours after an electrical incident.
- an exclusion zone of 300m should be established and maintained for 24 hours.
- tyre and vehicle inspection should be arranged before the next use of the vehicle or machine.

LEARN MORE – VIEW YOUTUBE CLIPS

Electrical Awareness for Rural Workers – very good introduction to risks around power and how to respond in an emergency.

youtube.com/watch?v=43vYz9FJMOQ

Learn more

1 **Managing electrical risks in the workplace Code of Practice**
safeworkaustralia.gov.au/doc/model-code-practice-managing-electrical-risks-workplace

2 **What are circuit breakers, Residual Current Devices and surge protectors?**
esv.vic.gov.au/safety-education/electrical-safety-at-home/household-wiring/

3 **Electrical Equipment – Rural industry Code of Practice**
worksafe.qld.gov.au/__data/assets/pdf_file/0008/59678/es-code-of-practice-rural-industry.pdf

4 **Working in the vicinity of overhead and underground electric lines Guidance note**
safeworkaustralia.gov.au/system/files/documents/1703/overhead-underground-electric-lines-general-guide.pdf

When electrical equipment is used in a 'hostile environment' it is more likely to be damaged or have a reduced safe lifespan. Hostile working environments involve exposure to moisture, vibration, dust, heat, corrosive chemicals or physical damage for example by sharp edges such as roofing iron.

Areas on a dairy farm where hostile environments occur include the dairy, yards, feed shed, calf shed, vat room, chemical use and storage areas, workshop, machinery storage, pump locations and the outdoors. In these areas portable (plug-in) electrical equipment and leads must be regularly inspected by a competent person.

A slight tingle or fuses blowing regularly are signs of a serious problem that needs to be investigated immediately by a qualified electrician. Many farm workers are adept at a range of skills, but electrical work should NEVER be attempted by an unlicensed person.

Electric fence energisers must be made to an Australian Standard and be repaired by a licensed electrician.

Mains power must never be connected to an electric fence and barbed wire should never be energised.

Best practice

1 Use a licensed and registered electrician for all electrical repairs and installations

2 Have your electrical installations set up to:
   - minimise the need for portable leads – replace with hard wiring
   - minimise use of extension leads on the ground by having strategically placed drop leads
   - have sufficient power outlets
   - protect cabling from damage
   - include correctly rated circuit breakers and safety switch (RCD) protection
   - have weatherproof and waterproof outlets and switches, especially in wet and outdoor areas.

3 Fit Residual Current Devices (RCDs) to power outlets including any three-phase outlets, and fit correctly rated circuit breakers and fuses that prevent overloading.

4 Use battery operated power tools where possible.

5 Use properly earthed power tools and ensure portable power tools are double insulated.

6 Set up a schedule for Test and Tag of electrical equipment and RCDs by a qualified person (see table below for time intervals for testing).

7 Inspect leads and plugs of portable electrical equipment before each use.

8 Regularly press the test button on RCDs to ensure they are working.

9 Fit lock-out devices to switches when undertaking maintenance of electrically operated equipment.

10 Fit security locks to switchboards.

11 Establish procedures to ensure that unsafe or damaged electrical equipment is disconnected and prevented from use until repaired and tested.

12 Provide relevant training, instruction, information and supervision to ensure workers are able to undertake tasks safely and without risk to health.

13 Ensure electrical contractors wear appropriate Personal Protective Equipment (PPE) including electrical hazard protection footwear.

Electrical hazards (other than overhead or underground power)

Practical steps to provide immediate reduction of risks:

1 Inspect old installations to sheds and houses and upgrade where required or disconnect if not needed.

2 Remove, disable and dispose of any unsafe electrical equipment that cannot be repaired.

3 Relocate or cover electrical cable that could be damaged by machinery or workshop equipment. Use conduit or cable protection. Avoid running leads through holes in iron walls.

4 Avoid running cable along rafters. Use conduit to protect from damage by rats, possums or birds. If using fencing wire over rafters to hang anything, ensure electrical cable is not present on the side or top of the rafter.

5 Avoid placing leads under floor coverings as overheating causing fire may occur.

6 Coiled leads can overheat and melt insulation increasing the risk of electrocution and fire. Uncoil before use. Return leads to storage after use.

7 If a circuit breaker continues to trip out, identify the overloading do not increase the fuse rating as overheating may occur causing a fire.

8 Ensure that safety switches or RCDs are used to protect workers using plug-in equipment. RCDs fitted to the switch board provide permanent protection, however portable RCDs can be used in the interim or where coverage is not certain (note: this type of RCD cannot be readily tested).

9 Use a single lead rather than multiples joined together, each join is a risk especially in wet areas.

10 Use lead stands or insulated cable hangers to keep leads off wet areas.

11 When undertaking maintenance using electrical equipment do not use metal ladders or wooden ladders with wire reinforcing especially in wet areas.

Tip

- Where possible, use battery operated rather than power tools such as drills and grinders.
- Welders and angle grinders often suffer damaged cables and plugs and extension leads. Nicks, splits, burns and pulling away of insulation near plugs all potentially expose live wire. Always inspect these before use and ensure they have a current test tag.

Types of Residual Current Devices (RCDs)

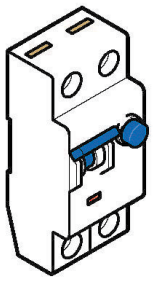


Figure 1: Switchboard RCD unit

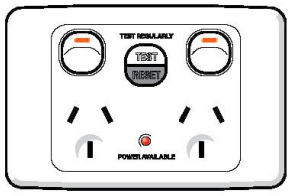


Figure 2: Fixed socket outlet RCD unit

Figure 3: Portable RCD fitted directly to power cable

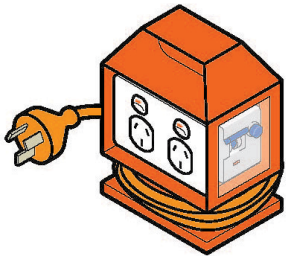


Figure 4: Portable RCD protected power board

Source: Managing Electrical Risks in the Workplace Code of Practice, Safe Work Australia, Feb 2016

Fit lock-out devices to switches when undertaking maintenance

Test and tag

Testing and tagging of electrical leads, RCDs and portable electrical equipment enables detection of faults and deterioration not detected by visual inspection.

The nature and frequency of inspection depends on the type of equipment and the environment in which it is used and may vary from six months to five years. Guidance on frequency of testing is provided in AS/NZS 3760:2010 In-service safety inspection and testing of electrical equipment.

Testing and tagging can be conducted by an electrician or a trained and qualified person. Some workplaces train up their own workers to undertake their test and tagging.

Records of testing must be kept – this can be the tags themselves.

Tip

Locate and sort out all portable electrical equipment and leads before test and tag contractor arrives.

RCD on switch board is tested and tagged.
Source: Andrew Sullivan

Power and electrical safety checklist

- ☐ Is a qualified and licensed electrician used for all electrical repairs and maintenance?
- ☐ Is all electrical equipment in a safe working condition, regularly inspected and maintained?
- ☐ Are all power outlets covered by a Residual Current Device (RCD)?
- ☐ Do all portable electrical equipment, leads and RCDs have a current test tag?
- ☐ Is a lock out or tag out procedure established to ensure faulty or damaged electrical equipment is not used?
- ☐ Is a lock out procedure used when undertaking maintenance especially in wet conditions?
- ☐ Is a dry powder or $C0_2$ extinguisher available for electrical fires in the hostile operating environment areas?

Overhead powerlines

Electrocution or electric shock can occur when parts of agricultural machinery and equipment such as grain augers, tip trucks, stock trucks, harvesters, loaders, telehandlers, irrigation pipes, or travelling irrigators contact or come close to energised overhead power lines.

Contact is not essential – a close approach to line conductors may allow a flashover to occur. The risk of flashover increases as line voltage increases, so it is important to know the line voltage and understand the no go zones for each powerline.

Aircraft used for paddock fertiliser or chemical application are also at risk of contact with powerlines.

The risk of carrying out work near overhead powerlines can be impacted by:

- visibility, location, height, arrangement and support structures of the powerlines i.e. poles, towers and stay wires
- voltage of the electric lines and whether they are bare or insulated
- sag of lines particularly in hot weather
- sway of lines during wind
- site conditions, including terrain, ground surface, and wind strength
- type of machinery, equipment and loads and their conductive nature
- competency, skill and experience of workers
- safe work practices and procedures established for workers including contractors.

'Look up and live' when using equipment that could come close to powerlines.

Source: Dairy Australia

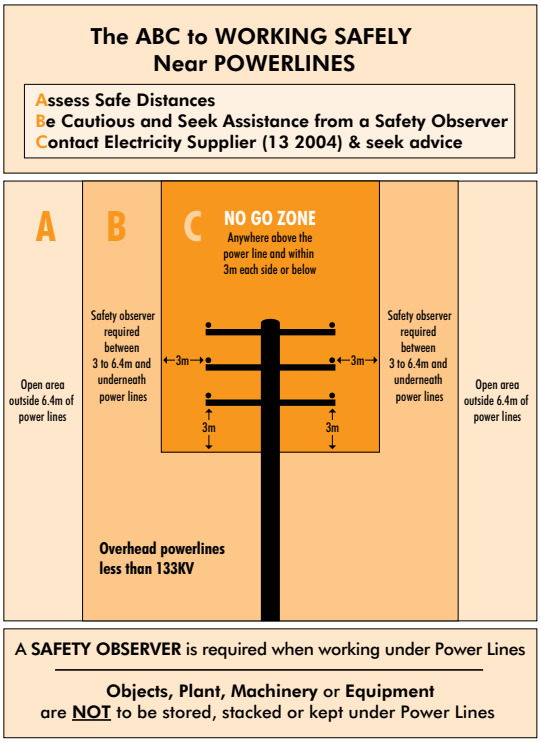
Best practice

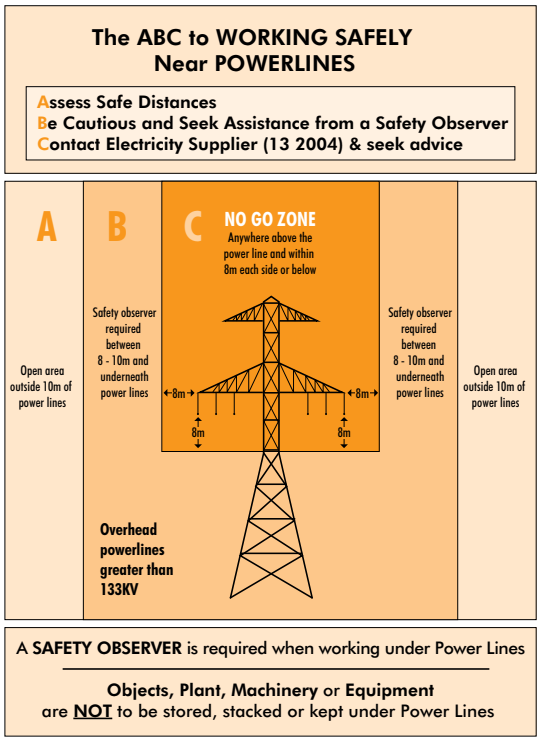
1. Identify where the potential hazards may be and mark them on your farm map.
2. Identify the machinery, equipment and practices that could come close to overhead power and check there is 'Look up and live' signage.
3. Always inform the contractors of location of powerlines by providing your farm map.
4. Contact the Electricity Supply Authority in your state to determine what work zones and approach distances are applicable to the powerlines on your farm or, if relevant, on your boundaries.
5. If powerlines are continually a hazard, such as around the dairy, consider having power put underground or the powerlines re-routed.
6. Re-route traffic and alter work practices likely to impact power lines.
7. Relocate plant, structures and bulk delivery sites away from the powerlines.

Practical steps to reduce risks when working near overhead powerlines

1 Replace augers with blower tubes for silos.
2 Erect a physical barrier that prevents machinery, equipment and people entering the unsafe or B Zone and define areas where plant should not enter with rigid barriers.
3 Limit plant such as loaders and telehandlers with height limiting devices.
4 Use electrically insulated plant.
5 Fit proximity sensors and warning devices.
6 Establish safe travel routes and work procedures for equipment, machinery and vehicles so as not to operate under powerlines.
7 Make hazards more visible with warning signs or on line tagging.
8 Install warning signs at entrances or gates where overhead power exists.
9 Display "Look up and live" on relevant machinery and trucks.
10 Use electrically tested insulating gloves, rubber boots and helmet.
11 Establish a permit to work system.
12 Supervise the work.
13 Train workers to identify electrical hazards and how to work safely.
14 Develop an emergency plan for contact with electric lines and train workers in emergency response procedures.

'No-go zones around powerlines and towers'





Source: Guide to working safely near overhead and underground power lines Energy Safe Victoria

esv.vic.gov.au/technical-information/electrical-installations-and-infrastructure/no-go-zones/

Underground electric cables

Electric shock can occur as a result of damaging underground, energised electric cables.

Explosive effects of arcing may cause fire if cables are crushed and this hazard is compounded if an underground gas leak is present or if other gases associated with oxy acetylene cutting are present.

Best practice

Legally, you must identify where underground electric cables are located before commencing work.

1. Always assume there is the chance of power underground and contact 'Dial before you dig' on phone 1100 or enquire online at 1100.com.au, or contact the Electricity Supply Authority.
2. Have a verified map locating the underground cables (this must be current).
3. Engage a contractor who is a qualified underground service locator to locate the cables electronically using ground penetrating radar and GPS and have them marked out on the ground and the map.
4. Use a qualified electrical contractor to undertake or assist with doing the work.
5. Use insulated hand tools to pot-hole the job at regular intervals to determine exact locations.
6. Have power disconnected if possible.
7. Always have an observer when excavating near underground power.

TipS

- Remember digging or augering post holes or ramming posts could also result in contact with underground services.
- Underground powerlines located on a map need to be verified using cable location technology. NEVER use a crow bar or equivalent to try to locate cables.

DIAL BEFORE YOU DIG®
www.1100.com.au

Power and electrical safety checklist – overhead and underground powerlines

- ☐ Have overhead and underground powerline hazards been identified on and adjacent to the farm?
- ☐ Have the machinery, equipment, vehicles and practices been identified that may come close to either overhead or underground power lines?
- ☐ Is power located underground in high risk areas such as around yards and the dairy?
- ☐ Have structures and work practices been relocated away from overhead powerlines?
- ☐ Are the presence of overhead powerlines clearly signed if in the path of machinery and vehicles?
- ☐ Is traffic or work able to be re-routed away from hazardous power lines?
- ☐ Is the voltage and work zones known for each overhead electric line type?
- ☐ Are workers including contractors made aware of the location of overhead and underground electric lines?
- ☐ Are **Dial-before-you-dig** procedures followed?

Farm records

Farm records

Manual handling

Farm safety guidelines

Workers' compensation data for dairy farming shows one in five claims involving more than five days off work are due to body stresses that result in musculoskeletal disorders. These serious injuries cause suffering for the people involved, economic losses for the farm and increased workers' compensation premiums and a poor employment reputation for the industry.

Workers on dairy farms do a wide variety of manual tasks that involve lifting, lowering, pushing, pulling, carrying, holding or restraining things or animals. These tasks have the potential to be hazardous if, for example, they involve postures that are awkward or sustained, forces that are high, sudden or repeated, movements that are repetitive, or exposure to vibration.

Musculoskeletal disorders resulting from hazardous tasks include back injuries, sprains and strains, joint and bone injuries or degeneration, nerve injuries or compression, hernias and chronic pain.

As an employer or person conducting a business on the farm, you have a legal responsibility to manage risk to health and safety associated with all hazardous manual tasks. Use these resources to ensure that you comply with this requirement.

Dairy Safely Home Safely - Ideas Bank

Reducing the need to lift buckets of calf milk on Nankita Dairy farm

Nankita Dairy Farm at Mount Compass have installed a nifty system for collecting and transporting calf milk which reduces the need to lift heavy buckets full of milk and tip them into calf feeders.

Step 1 – Milk collected into test buckets (from cows undergoing antibody treatment) is tipped into a blow proper this is the only step that uses buckets

Step 2 – Milk from the hopper is pumped up into a refrigerated calf milk storage vat

Step 3 – If more calf milk is required there is a line directly to the calf milk storage fat from the main milk vat

Step 4 – Calf milk is pumped from the calf milk storage vat to another vat on the back of the farm ute which is then driven to the calf shed

Step 5 – The calf milk is pumped from the vat on the unit directly into the calf feeders

This system has minimised the risk of injury to the calf rearers' wrists, shoulders and back.

The hopper is connected to the calf milk storage vat via a pipe with a small pump.

Step-by-step – Setting up safety for manual handling on your farm

1. Getting started

- [ ] **Read through this information pack**
- [ ] Complete the manual handling **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of things to do and **set a date** to have each thing completed in the **Action Plan.**
- [ ] Read through the information quickly again.
- [ ] Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).

2. Assessing the manual handling risks on your farm

- [ ] Task someone with making a list of the manual handling tasks on the farm. Ask them to take pictures of some of the tasks.
- [ ] Do a **risk assessment** of each task using the Risk Assessment Checklist and plan the control changes needed.
- [ ] Make any required **structural changes** you have identified and buy any gear needed.
- [ ] Arrange any **training** needed.
- [ ] Find out if you have **contractors** who can do the work you need that involves some of these tasks. (e.g. supply and fitting of detergent drums).

3. Setting up your policy, processes and paperwork

- [ ] Set up relevant **Standard Operating Procedures** for tasks involving manual handling.
- [ ] Put a copy of the SOPs with the documents you use to **induct new staff or relevant contractors.**
- [ ] Go through the arrangements you now have in place with workers or family at your next **workplace meeting**.

Sleep well – job well done.

Resources in this section

- **Information** about manual handling tasks on dairy farms and legal obligations
- **Safety Self-Assessment** for manual handling
- **Hazardous Manual Task Identification** Worksheet

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety** You can edit the templates to suit your farm.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For manual handling	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Worker involvement and feedback about manual tasks	☐ Not involved	☐ Some information and discussion	☐ Fully involved in decisions and developing procedures
Hazardous manual tasks identified, and risk assessments conducted e.g. for milking, calf rearing, feeding, workshop work, handling chemicals and tractor operation	☐ Not done	☐ Some done	☐ All tasks assessed
Bulk handling e.g. for feed, calf milk and fertilisers	☐ Not used at all	☐ In some areas	☐ In all areas
Mechanical aids such as trollies, hoists, carts, pallet jacks and frontend loaders used for lifting and moving heavy and awkward objects	☐ None, or not used	☐ Some available, sometimes used	☐ Available and always used
Dairy design for workers to milk comfortably (height of platform or pit, equipment location, ACRs, matting)	☐ Not considered	☐ Some features	☐ Well designed for milker comfort
Other work areas designed for worker comfort (reducing the need to overreach, twist or bend continuously and keeping everything within reach or within the shoulder-hip area.)	☐ Not considered	☐ Some areas well set up	☐ All areas well set up
Ergonomic seating on tractors and mobile plant	☐ None	☐ Some	☐ All
Work procedures for relevant tasks	☐ Not developed	☐ Limited development and review	☐ All developed and regularly reviewed
Implementation of work procedures	☐ Never	☐ Sometimes	☐ Always
Scheduling to ensure adequate breaks, job rotation and prevention of fatigue	☐ Not done	☐ Limited development and review	☐ All developed and regularly reviewed
Training in safe manual handling practices including setting up the work area, using aids, safe lifting techniques and managing the body?	☐ Not done	☐ Some training but not covering all aspects	☐ All workers trained in all aspects needed
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up to date
Reporting injuries	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on, including notifications required by law

Manual handling

Work Health and Safety Regulations define a hazardous manual task as one that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing, involving one or more of the following:

- Repetitive or sustained force (e.g. pulling a calf or carrying buckets)
- High or sudden force (e.g. lifting a large drum or calf into the back of a vehicle; physically handling calfs)
- Repetitive movement (e.g. attaching milking cups)
- Sustained or awkward posture (e.g. bending over for cups-on in a shallow pit or at a low rotary platform)
- Exposure to vibration (e.g. operating a tractor or quad bike over rough ground).

These tasks occur in many work areas on the farm, including the feed shed, the workshop and the chemical store, the calf shed, gateways and yards and especially in the dairy when milking.

Musculoskeletal disorders that occur from hazardous tasks include:

- back injuries, including damage to the muscles, tendons, ligaments, spinal discs, nerves, joints and bones
- sprains and strains of muscles, ligaments and tendons
- joint and bone injuries or degeneration, including injuries to the shoulder, elbow, wrist, hip, knee, ankle, hands and feet
- nerve injuries or compression (e.g. carpal tunnel syndrome)
- muscular and vascular disorders that result from hand-arm vibration
- soft tissue hernias
- chronic pain.

These injuries occur either by gradual wear and tear to joints, ligaments, muscles and inter-vertebral discs caused by repeated or continuous use of the same body parts (including static body positions), or by sudden damage caused by strenuous activity or unexpected movements such as when loads that are being handled suddenly move or change position.

There can also be a combination of gradual wear and tear and sudden damage. A body tissue that has been weakened by cumulative damage may be vulnerable to sudden injury by a lower force. For example, injuries to the back may appear to be sudden but are often a result of many years of wear and tear, making the discs between the vertebrae weak and prone to rupture.

Tips

As a guide, the National Model Code of Practice for Hazardous Manual Tasks, (October 2018) says:

- a repetitive task is one that occurs more than twice a minute
- a sustained task is one where the posture or force is held for more than 30 seconds at a time
- bending the back or neck more than 20 degrees forwards or sideways, or 5 degrees backwards, in a repetitive or sustained task can be hazardous
- a task of long duration is one that occurs continually for more than 30 minutes at a time, or more than 2 hours in total over a whole shift

By law

WHS Regulations require that a person conducting a business or undertaking must manage risks to health and safety relating to a musculoskeletal disorder associated with a hazardous manual task. They must:

- identify reasonably foreseeable hazards that could give rise to the risk
- eliminate the risk so far as is reasonably practicable
- if it is not reasonably practicable to eliminate the risk – minimise the risk so far as is reasonably practicable by implementing control measures in accordance with the hierarchy of control
- maintain the implemented control measure so that it remains effective
- review, and if necessary revise, risk control measures to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

By law, you are responsible for all the people who perform manual tasks on your farm, including all permanent and casual milkers and calf-rearers.

The most common hazardous manual tasks on dairy farms are associated with bending, lifting and carrying (especially calves, drums, buckets and bags) and working with awkward postures, including milking and operating machinery. Milking is particularly significant as it often involves a range of hazardous manual tasks and is the dominant activity on the farm.

The risk of injury can be significantly reduced by setting up the physical aspects of the workplace and the work processes to minimise the requirements for bending, twisting or loading and lifting heavy items. During long shifts the tasks should be changed around to give the muscles a break.

Best practice

1 Use the National Model Code of Practice* and associated checklists to identify and manage the risks of hazardous manual tasks in the workplace.

2 Involve workers in the process, especially to identify potential manual handling hazards.

3 Control the risks, for example:

   a. (re)design the workplace to minimise manual handling hazards

   b. use mechanical/lifting aids where possible

   c. ensure that workers are trained in correct techniques for manual handling jobs, including asking for help.

4 Monitor the effectiveness of those controls.

Learn more

***Codes of Practice can help identify and manage manual handling risks in the workplace.:**

- Use Appendix D Hazard identification worksheet in Hazardous Manual Tasks Code of Practice, Safe Work Australia, October 2018.

  safeworkaustralia.gov.au/system/files/documents/1905/model-cop-hazardous-manual-tasks.pdf

This checklist is useful to identify hazards associated with current and new tasks on the farm.

Tip

Ask about discomfort

Workers can provide valuable information about discomfort, muscular aches and pains that can signal potential hazards. For example, ask workers to identify tasks that:

- are difficult to do (or appear harder than they should be)
- are very tiring (muscle fatigue reduces work capacity)
- are awkward or dangerous (for example, difficulty controlling loads)
- cause discomfort that persists, or re-occurs the next day, or continues after rostered days off

Tip

Think ergonomics (human factors)

Ergonomics:

- explores the interaction between people and the work environment
- is the process of designing or arranging workplaces, products and systems so that they fit the people who use them
- consider the workers individual size, strength, skill, speed, sensory abilities and sometimes attitudes.

Small things can make a big difference when they involve equipment that is used many times. For example:

- seating on tractors and other mobile plant ergonomically designed with settings to suit each user
- clusters that are not too heavy
- well balanced, light weight tools that minimise wrist twist, with easy-to-use triggers and minimal vibration.

Tip

Well designed work areas can significantly reduce the chances of injuries. For example:

- keep things you use most often in easy-to-reach places that minimises twisting
- reduce carrying distances
- avoid the need to open doors or gates while carrying loads.

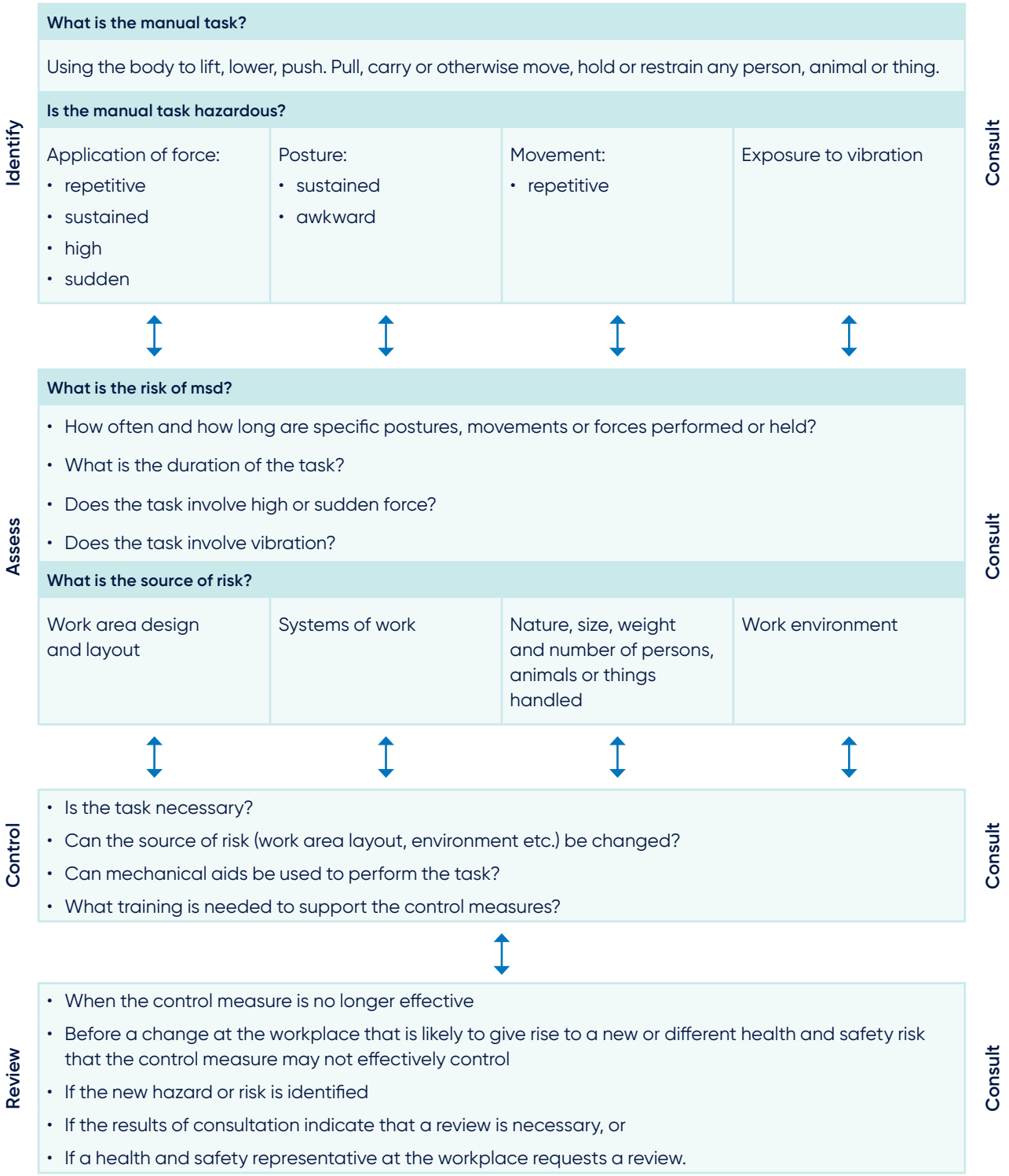
Learn more

Visit:

- Preventing manual handling injuries on farms
  worksafe.vic.gov.au/hazardous-manual-handling-health-and-safety-guide
- Ergonomics and manual handling
  aghealth.sydney.edu.au/wp-content/uploads/2019/05/6.-Ergonomics.pdf

The risk management process for manual tasks (Safe Work Australia 2018)

Risk management process for manual tasks



*Source: **safeworkaustralia.gov.au/system/files/documents/1905/model-cop-hazardous-manual-tasks.pdf** (Appendix C page 59)*

Milking

Handling milking clusters is the most frequent and repetitive manual task on a dairy farm and can result in injury, particularly if milkers are bent in awkward positions (like attaching or removing milking clusters in a shallow pit or at a low rotary platform). The obvious hazard is a mismatch between worker height and pit depth or rotary height.

Automatic Cup Removers (ACRs) remove the need for someone to work in the cups-off position but pulling down on the ACR chord to prepare the cluster for milking can require substantial effort and being repetitive can increase fatigue and potentially result in injury. To avoid this, vacuum relief valves should be fitted to the ACRs.

Other milking related situations where injuries can occur include:

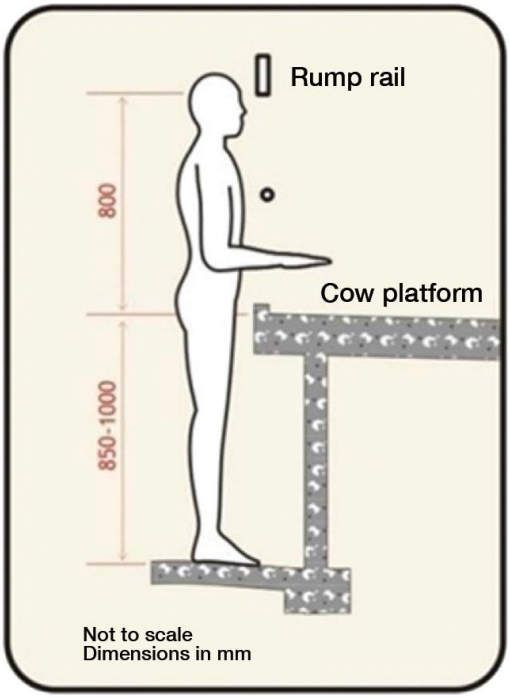
- twisting or bending to reach control pads, herd test flasks or other frequently used items that cannot be placed directly in front of the milker
- milking when the pace is too high, where stress leads to tightened muscles and fatigue
- working on concrete for long periods, which can increase muscle fatigue
- jumping from heights such as rails and platforms which can lead to shock loading of the back.

Robotic or automatic milking eliminates the risks associated with milking and this may be a consideration for some businesses when considering new dairies.

Tip

Set up the dairy to reduce the need to bend, twist or load.

- Keep the work in front, between shoulder and mid-thigh height. This helps people to work in a position that keeps the natural lumbar curve in the lower back.
- Move the feet rather than twisting the back.
- Have the load in front and close to the body.



Recommended heights for milking
Source: CowTime Quicknotes

Best practice

Engineering

1 Design or alter cups-on/off area so it adjusts to suit the worker's height.
2 Locate idle clusters on brackets and jetters at a height that reduces bending and reaching.
3 Fit ACRs wherever practicable.
4 Retrofit vacuum release valves on ACR rams.
5 Locate controls or frequently used items in front of the worker, or a step away to avoid twisting.
6 Always consider milker fatigue when selecting 'higher weight' clusters.
7 Use teat spray wands with a long nozzle to reduce the need to bend and reach.
8 Locate herd test sample flasks in a position that minimises bending.
9 Use a herd test sample sorting table that reduces reaching (angled towards worker) and bending.
10 Set colostrum buckets on wheels.
11 Use rubber matting in the pit or cups on, cups off position to reduce fatigue (for individual mats, ensure they have bevelled edges to reduce the risk of tripping).

Administrative Controls

12 Consult with workers, observe and review workers' cups-on technique to reduce repetitive overreaching.

13 Rotate jobs to reduce repetitious manual handling tasks, including rotating between cups-on and cups-off positions.

14 Ensure the pace of milking is set to match the worker (especially when herd testing).

15 Do warm-up exercises and stretching before milking.

Personal Protective Equipment (PPE)

16 Wear cushioned rubber boots.

Work positions that keep the natural curve of the lower back minimise back injuries.

Source: Dairy Australia

Tip

Milking stretches

Top level sports people wouldn't dream of skipping their pre- and post- activity stretches!

Milking can also be a strenuous activity and tailored stretches to prepare the body for milking and cool down afterwards should be a part of everyone's routine.

Learn more

Visit:

- Manual handling in the dairy
  worksafe.govt.nz/topic-and-industry/agriculture/working-with-animals/staying-safe-in-and-around-farm-dairies

Lifting and carrying, including calves, drums, buckets and bags. Working with awkward postures.

Lifting and carrying objects can involve high, sustained, repetitive or sudden forces. For example, lifting and stacking feed or fertiliser bags, carrying milk or water in buckets, lifting drums to pour out contents, lifting coils of wire and lifting calves on to a vehicle are all common tasks that contribute to the risk of lower-back pain, injury and other musculoskeletal disorders.

Alternatives to lifting and carrying heavy items include, for example: using trolleys and hoists, or purchasing in either smaller package sizes or in bulk and moving pallets with a front-end loader.

There is no prescribed maximum weight that a worker should lift, as manual handling often involves a combination of risks. The worksheets in Appendices of the Hazardous Manual Tasks Code of Practice, (Safe Work Australia, October 2018) provides a good guide to assess tasks.

Features of loads that influence the risks:

- A bulky load makes it hard to keep the weight close to the body and increases the load on the spine and joints.
- A lighter weight that is held away from the body needs the same effort to handle as a heavy one held close.
- Jerking or moving a load quickly uses more force than just carrying the load.
- Extra force and awkward postures may occur if loads are jammed or stuck, uneven in weight or unstable (such as liquids or sacks of pellets), greasy, hot or very cold, contain hazardous substances, have inadequate handles or sharp edges, or obstruct a forward view.
- And the risk of injury is increased if the work is conducted on slippery or uneven surfaces.

Animals pose particular manual handling problems, such as how to maintain a grip on the animal and how to counter unpredictable movements. How much help the animal can give, whether it cooperates, and how much pain it might experience also affect the way each animal should be handled. In some situations, special techniques are required (See Farm Safety Manual topic on Working with Livestock).

Moving new-born calves is a common task on dairy farms. Calf trailers should be used rather than vehicles. The trailer height should allow the worker to place the calf with minimum effort, without obstruction and without twisting. The trailer should be located as close to the calf as possible. A slide-out ramp can be used to walk older calves on and off.

Tip

General recommendations for lifting objects:

- Balance your body's weight equally over both feet.
- Step close to the load.
- Think about the best place to grip the load and the best type of grip to use.
- Bend your knees and use your legs, not your back.
- Keep the load in front of you, as close to your body as possible.
- Apply force gradually, after testing the weight.
- Lift smoothly, rather than using sudden exertion.
- To change direction while moving, take a step in the new direction rather than twisting your body.
- Pace the work if it goes on for a long time, take small breaks often.
- For slightly heavier loads obtain assistance and team lift using the same technique.

Tip

Lifting new-born calves causes many back injuries.

If you have to lift a new born calf, use your legs and keep the back as straight as possible.

Squat down beside the calf, pull it in close with one arm around the front and the other around the hind legs, hold the calf firmly then straighten the knees to lift.

Correct calf-lifting technique
Source: Worksafe NZ

Best practice

Elimination

1 Use bulk handling equipment and methods for hay, grain, feed and fertiliser.

2 Obtain items on pallets.

Substitution

3 Get items in smaller packaging, e.g. smaller packs of steel posts, smaller trays for herd test flasks.

Engineering

4 Use pallet jacks in locations not accessible with the front-end loader.

5 Use ute or truck mounted hoists.

6 Use bag and drum trolleys and carts for shifting loads.

7 Use drum pourers for chemical or oil transfer.

8 Set up content extraction systems for drums of chemicals to reduce lifting and tipping.

9 Have ramps or level ground to access the dairy for delivery of chemical drums and pickups of herd test crates.

10 Design calf trailers at a height for easy placement of calves.

11 Install ramps for accessing trailers and vehicle.

12 Set up bulk transfer systems for calf milk (pumps, hoses and holding vat-tank).

13 Attach handles to items, or place them in a carrier with handles.

14 Source chemicals and substances in ready to dose packaging.

15 Maintain yards in good condition and ensure gates swing freely.

16 Ensure good vehicle suspension.

17 For tractors and other mobile plant, install ergonomically designed operator seats on suspension systems with well-maintained adjustments for individual operators.

Administrative Controls

18 Store light items on shelving above shoulder height, heavy items at ground level for access by trollies and medium weight items at mid-thigh.

19 Provide training in how to identify hazardous manual handling tasks, the use of manual handling aids and safer lifting and team lifting techniques.

Source: WorkSafe Victoria – A Safer Way to Lift and lower objects

A drum trolley makes moving and dispensing from drums much easier. Source: Andrew Sullivan

20 Balance the load when carrying buckets, e.g. 15 litres in each hand.

21 Plan regular rest breaks to reduce holding awkward positions for too long.

22 Rotate jobs to reduce repetitious manual handling tasks.

23 Do warm up exercises and stretching.

Personal Protective Equipment (PPE)

24 Use gloves for grip and to protect hands from sharp edges.

25 Wear boots with good grip and reinforced toes (in case a load is dropped).

Hazardous Manual Task Identification Worksheet (Safe Work Australia)

Work area:

Health and safety representative and workers taking part:

Management representative: Date:

Does the task have any of the characteristics of a hazardous manual task? (Tick any of the following that apply.)

Task	Repetitive or sustained force	High or sudden force	Sustained or awkward postures	Repetitive movement	Exposure to vibration
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐

If you ticked any boxes for a particular task, you should do a risk assessment of that task including the Discomfort Survey in Appendix E, Appendix F – Risk Assessment Worksheet in the *Hazardous Manual Tasks Code of Practice*, Safe Work Australia, October 2018 to do this in a comprehensive way.

These are available at **safeworkaustralia.gov.au/system/files/documents/1905/model-cop-hazardous-manual-tasks.pdf**

Farm records

Farm records

Working with livestock

Farm safety guidelines

Recent dairy farm fatalities involving cattle highlight the risks associated with working with large and sometimes unpredictable animals.

Many dairy workers experience some sort of injury each year as a result of being kicked, stood on or crushed. More serious injuries such as broken bones also occur and some can be fatal.

The risk of injury increases: when working with bulls; using poorly designed and constructed facilities; where workers lack experience and knowledge of animal behaviour. Injuries can lead to more serious or fatal outcomes when working alone.

In addition to these physical injuries, cattle can also transfer certain diseases to people with sometimes long-term and debilitating effects.

As an employer or person conducting a business on the farm, you have a legal responsibility to manage risk to health and safety associated with all aspects of working with livestock. Use these resources to ensure that you comply with this requirement.

From Safe Work Australia **2013**

Work-related injuries and fatalities on Australian farms

In 2003 to 2011 there were 105 work-related fatalities on farms that did not involve a vehicle. The most common cause of death was being bitten or hit by an animal, with 11 of the 18 fatalities in this category involving cows.

Some examples include:

- *The deceased went to feed cattle and when she has thrown the feed into the trough the cattle have come running up. One cow was heavily in calf and was particularly aggressive at feed times. This cow has knocked the deceased to the ground and trampled her.*
- *The deceased was loading cattle from a yard into a cattle loading ramp. As a steer was going up the ramp it has fallen. The deceased has run forward slightly to attempt to shut the gate. Almost simultaneously the steer has hit the gate pushing it backwards into the deceased's chest.*

Farm deaths and injuries have a huge impact on farmers and agricultural workers and their families. For many farmers a serious injury to themselves or an injury or death to one of their workers is likely to result in huge personal and financial costs and sometimes the loss of their farm. And yet so many of the incidents that result in serious injury or death could have been avoided by a little planning and forethought, a little extra cost and time to make the work safer.

Step-by-step – Setting up safety for working with livestock on your farm

1. Getting started

- [ ] **Read through this information pack.**
- [ ] Complete the working with livestock **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of things to do and **set a date** to have each thing completed in the **Action Plan.**
- [ ] Read through the information quickly again.
- [ ] Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).

2. Assessing the risks around working with livestock on your farm

- [ ] Task someone with making a list of the animal handling tasks on the farm. Ask them to take pictures of some of the tasks.
- [ ] Do a **risk assessment** of each task – the activity and facilities used – and plan the control changes needed.
- [ ] Make any required **structural changes** you have identified and buy any gear needed.
- [ ] Arrange any **training** needed.

3. Setting up your policy, processes and paperwork

- [ ] Set up your farm **Policy** on working with livestock and the relevant **Standard Operating Procedures** for tasks involving animal handling.
- [ ] Put a copy of the Policy and SOPs with the documents you use to **induct new workers** or **relevant contractors**.
- [ ] Go through the arrangements you now have in place with workers or family at your next **workplace meeting**.

Sleep well – job well done.

Resources in this section

- **Information** about safety in working with livestock on dairy farms and legal obligations.
- **Policy template**.
- **Safety Self-Assessment** for working with livestock.
- **Standard Operating Procedure** template for working with livestock.

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety** You can edit the templates to suit your farm.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For working with livestock	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Worker involvement and feedback about handling livestock	☐ Not involved	☐ Some information and discussion	☐ Fully involved in decisions and developing procedures
Dairy designed to reduce injury from kicking and crushing by cattle e.g. backing and kick rails	☐ Not done	☐ Some done	☐ All done
Barriers in place to prevent cattle getting into the pit or falling off the rotary	☐ Not done	☐ Some done	☐ All done
Well designed and maintained veterinary facilities available, including crushes, pregnancy testing and AI facilities	☐ Not available	☐ Some available	☐ All available
Loading ramps with walkways	☐ None	☐ Some	☐ All
Gates, races, yards maintained	☐ Not done	☐ Some done	☐ All done
Culling cows and bulls with poor temperament	☐ Never	☐ Sometimes	☐ Always
Work procedures for relevant tasks including working with bulls and freshly calved cows, calving down cows and loading cattle	☐ Not developed	☐ Limited development and review	☐ All developed and regularly reviewed
Implementation of work procedures	☐ Never	☐ Sometimes	☐ Always
Training in cattle behaviour and low stress cattle handling	☐ Not done	☐ Some but not covering all aspects	☐ All workers trained in all aspects
Training in handling bulls	☐ Not done	☐ Some but not all workers	☐ All workers trained (or not applicable – no bulls on farm)
Induction to using the cattle handling facilities on the farm	☐ Not done	☐ Some but not covering all facilities	☐ All workers trained in all facilities
Cattle vaccinated against leptospirosis	☐ Not done	☐ Some but not comprehensive program	☐ All animals have initial and required booster shots
Workers tested/vaccinated for Q Fever	☐ None	☐ Some	☐ All
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up to date
Reporting injuries and near misses	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on, including notifications required by law

WHS Regulations require that a person conducting a business or undertaking must manage risks to health and safety relating to working with livestock. They must:

- identify reasonably foreseeable hazards that could give rise to the risk
- eliminate the risk so far as is reasonably practicable
- if it is not reasonably practicable to eliminate the risk – minimise the risk so far as is reasonably practicable by implementing control measures in accordance with the hierarchy of control
- maintain the implemented control measure so that it remains effective
- review, and if necessary revise, risk control measures to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

By law, you are responsible for the safety of all the people on your farm, including farm staff, relief milkers, visitors and contractors such as AI technicians, vets and livestock carriers.

Most herds have cattle with a range of different behaviours, including docile, flighty, nervous and aggressive types. Even docile animals can change temperament if stressed or isolated. Cows with young calves can become aggressive, some heifers can be difficult to train to milk, and bulls should always be approached as unpredictable.

There is no way that working with cattle can be made perfectly safe, but the consistent use of behavioural principles to achieve low stress handling will reduce the risk.

As far as practical, working on your own should be avoided, particularly when loading cattle, breaking in freshly calved heifers, undertaking tasks with new born calves and working with bulls. Contractors should not load cattle alone and AI technicians and vets should be assisted. Young children and inexperienced bystanders should not be in yards and sheds when cattle are present.

Serious injuries and fatalities occur when working in poorly designed, constructed and maintained yards and dairies. Cattle handling facilities should be designed for good cattle flow, minimising the risk of stress and injury to cattle and to handlers. In pressure areas handlers must be protected by barriers and have ways of safe access and escape. Improvements to existing facilities can usually be made to reduce risk without the need to fully construct new ones. Regular maintenance of yards and handling facilities is critical.

For longer term improvement in handling your herd, a strong selection strategy of culling/breeding animals based on temperament can contribute to reduction in poor animal behaviour.

It is important to encourage all workers to report incidents and 'near misses' around working with livestock if they occur. This enables you to investigate hazards before they become statistics. A positive, responsive attitude by supervisors and managers is essential to have this type of reporting become part of the safety culture on the farm.

Tip

Older farmers may be more skilled in handling cattle but are likely to be less agile and should take steps to reduce risks, such as only working outside yards and races. If they do fall, older people are more likely to suffer a fracture.

Tip

Milking alone

Like working remotely, working with livestock is more risky if you are alone. Always have a phone or other method of communication if there is only one person milking.

Cattle handling techniques

Low stress animal handling techniques make work with cattle safer and more efficient.

Understanding basic cattle behaviour (as individuals as well as mobs) is critical to reducing stress of both the animals and the handler.

Training in animal behaviour is essential for new workers and is also useful for experienced handlers who gain a better understanding of why they do what they do, making it easier for them to instruct others.

Inappropriate and aggressive handling causes animal stress and risk to other workers and should never be tolerated.

Because of the unpredictability of livestock, the focus is on reducing and controlling risk.

Best practice

1 Develop an understanding of animal behaviour and learn how to convey this to employees and others who you may work with.

2 Induct all new workers in basic animal handling techniques and safety rules such as:
- never put your head under a kick rail
- never put your arm between a rail and an animal (particularly kick rails in the dairy)
- never put your hand flat on the dairy concrete
- never stand between a gate and a fence when holding the gate
- always keep an eye on where cattle are, and keep in communication with other workers.

3 Ensure handlers move quietly and calmly around stock.

4 Ensure staff are trained in animal management procedures they need to perform, such as injecting or vaccinating stock.

5 Review how heifers are introduced to milking (consider calving them ahead of the herd or feeding them in the dairy before calving if this will make educating them easier).

6 Establish preferred handling techniques for cows with new-born calves on your farm, including not working alone.

7 Establish preferred handling techniques for bulls on your farm, including not working alone.

8 Cull animals with poor temperament, particularly those that are aggressive or kickers.

Learn more

- **Behavioural Principles of Livestock Handling** for low stress handling by Temple Grandin

  grandin.com/behaviour/principles/flight.zone.html

  grandin.com/references/new.corral.html
- **Guides to cattle handling** by FarmSafe Australia and WorkSafe Victoria

  worksafe.vic.gov.au/safer-cattle-handling
- **Low stress dairy e-learning seminars available commercially** from Neil Chesterton

  lamecow.co.nz/Cowstuff.html

Cattle handling tip

Understanding basic principles of animal behaviour makes working around cattle safer. These four points are helpful in understanding low stress cattle handling:

1 **Position makes a difference** – their eyesight has a 'blind spot'. Humans have eyes facing forwards and can see 180 degrees around them. Cattle have panoramic vision from eyes on the sides of their heads and can see 300 degrees 'wide angle'. However, they have a blind spot immediately behind them and relatively poor vision directly in front (they may lower their heads to get better focus straight ahead). Panoramic vision gives poor depth perception and cattle may be fearful of shadows that can look like holes to them and may resist moving from bright light to shadow.

Cattle can easily be startled if approached from behind. Approach from the side to give the animal the best view.

2 **Pressure can be applied via their 'flight zone'.** The flight zone is the animal's personal space – the imaginary area inside which it feels safe. The size of the area depends on the animal. Dairy cows may be quite tame, with very small flight zones, whereas bulls usually have larger flight zones. Usually animals will move away when a handler enters their flight zone.

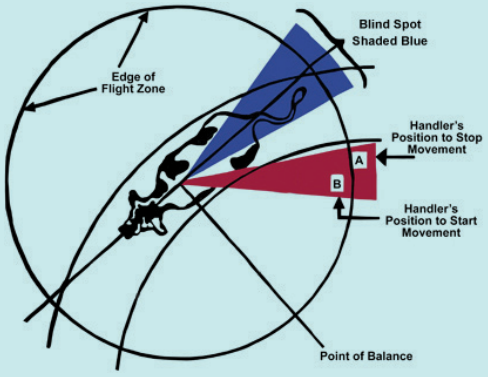
Enter the flight zone to start movement, but move out to 'release pressure' once the animal has started.

3 **Direction depends on the 'point of balance'.** Animals tend to walk in the opposite direction to the handler. The point of balance is the animal's shoulder. Cattle will move forward if the handler stands behind the shoulder, and back if the handler stands in front of the shoulder.

Your movement influences theirs. Walk past the point of balance in the opposite direction to the way you want the cattle to move. They are herd animals, so work from the front of the group and the others will follow.

4 **Signs of stress flag increased risk.** Cattle are usually gentle animals, but may kick, push or charge if stressed.

Look for signs such as raised ears, snorting, pawing, flicking or raised tail, butting, bellowing, displaying a broadside view.



Source: Adapted from Temple Grandin

Bulls

Attacks by bulls are the number one cause of fatalities while working with livestock.

Most dairy farms have mop up bulls, even if they largely use AI. Sometimes bulls can be hard to handle on the farm. Bull temperament can change from day-to-day and some breeds can be more aggressive than others. What do you do to make it safer for people and other animals?

Best practice

1 Explain the risks associated with bulls to your farm team and train them to recognise signs of aggressive behaviour and how to respond, including to never trust or turn your back on any bull.
2 Get rid of bulls that are consistently aggressive, or become obstructive and block the herd's progress from the paddock to the shed, or show stalking behaviour or 'broadside threats' towards farm staff.
3 Exclude bulls from the dairy yard.
4 Do not have horned bulls.
5 Do not let anyone work bulls alone – always have at least two people present.
6 Avoid moving bulls on foot in paddocks.
7 Ensure strong paddock fences, with electric fencing support on boundaries where bulls are kept.
8 Provide caution signage if there is a risk to the public or children.
9 Ensure that facilities for holding and treating bulls and doing tasks like fitting chinball harnesses or trimming feet are suitable to do so without risk to handlers.

Tip

Don't expect your relief milkers to work with bulls that they have not been trained to understand or handle. Knowing about bull behaviour will help to reduce accidents.

Never trust a bull, even if he has always seemed quiet to handle.
Source: Dairy Australia

Learn more

More information on bull behaviour by Temple Grandin

grandin.com/behaviour/principles/preventing.bull.accidents.html

Cattle handling facilities

Most injuries occur to handlers working at close range to cattle and groups of cattle when yarding up, milking, undertaking husbandry practices in the dairy, races or crushes, and when loading into trucks and trailers.

Some tasks can be undertaken without human involvement, e.g. automatic drafting and application of chemicals such as teat spray and fly control.

Simple design features can make a big difference in the safety of cattle handling facilities. As much as possible close work with cattle should be undertaken with barriers in place to prevent being kicked, crushed or charged at. The principle of 'separation of man and beast' in these close work areas reduces the risk of injuries. Examples include:

- Yards outside the dairy for AI, pregnancy testing and other animal husbandry procedures should have lead up areas narrow enough to be worked from the outside, entry gates with quick catch latches and race entries with sliding gates. These areas should be covered (protection from sun and rain) and have good lighting.
- Races should enable access for all size stock, restrict animals turning around, and provide safe access for handlers where needed.
- Crushes should be designed for safe access to the rear of the cow from both sides (catering for left and righted hand vets and stock handlers), have vet gates, quick catch latch gates and panels. Bale heads should be designed for ease of capture and release with no nip points or head high projections.
- Loading ramps should be designed so that the handler does not need to be in the lead up yard-race or ramp. The forcing yard should have a quick catch latch gate and a sliding gate at the bottom of the ramp. The ramp itself should be of solid construction with a non-slip surface and have a walkway attached (if this is on the left hand side of the ramp it will be easier to close the truck gate). The top of the ramp should have an apron at the top at truck level. The walkway will need fall protection in the form of guard rails and toe boards. There should be lighting at loading ramps – late loads are bound to arrive on some occasions.

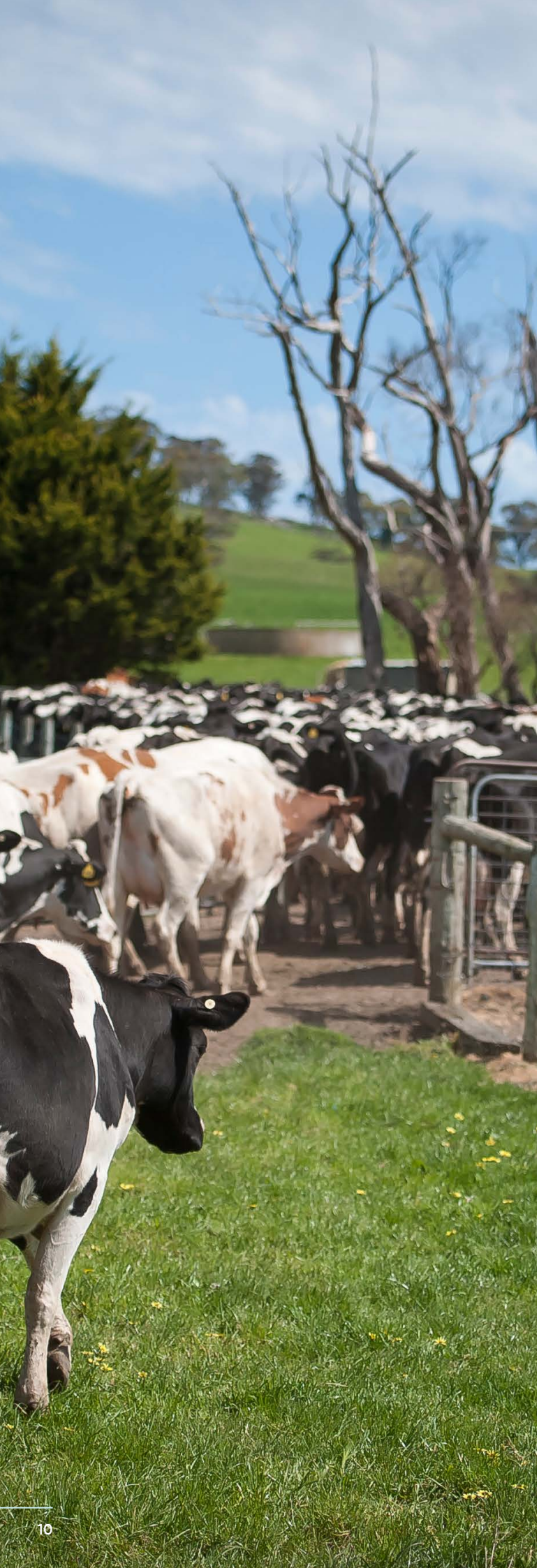
Even the best designed facilities will be unfamiliar to new workers so everyone should be inducted on how each part operates and how to use them safely and efficiently.

Best practice

1. Set up the entrance to the yard / dairy so that it is straight and slightly up hill and not into direct sunlight (all features that contribute to smooth cattle flow).
2. Ensure that cows cannot enter the pit/come off the rotary platform.
3. Fit and maintain nib rails, backing and kicking rails.
4. Where possible use backing gates that can be operated from the pit.
5. Have cow exit from the dairy controlled from the pit. Design the exit to achieve effective free movement of cows.
6. Ensure that gates in yards swing freely and are easily and effectively secured. All sliding gates, hinges and moving parts should be maintained and well lubricated.
7. Maintain yard surfaces with grip for stock and handlers.
8. Where platforms are attached to rotary dairies for vet work, ensure they are purpose built and provide protection from moving parts, shear and crush points, and fall protection (as per the Australian standard AS 1657). This will include steps, hand rails and toe-boards. There should also be access to emergency stop buttons for the rotary from vet platforms.
9. Provide separate races and facilities for pregnancy testing and AI.
10. Design loading ramps with non-slip surfaces and a walkway with fall protection.
11. In all areas, set up so that if an animal goes down it is easy and safe to assist it get up or be removed e.g. include hinged or removable panels in races.
12. Induct all new workers on how each section/ component of the cattle handling facilities works and how animal flow is optimised.

Tip

If weld mesh is used in any fencing, yards or pens it requires regular inspection to check for broken welds and projections.



Learn more

See two excellent summaries of key cattle handling facilities by the service providers most engaged with their use:

Cattle crush suitability and design information from Australian Cattle Vets

mycattlevet.com.au/wp-content/uploads/2016/01/Crush-Design-and-Safety-WEBSITE-FINAL.pdf

Guidelines on designing and improving loading ramps

WorkSafe Victoria have developed guidelines for the construction of safe and efficient loading ramps and a video on amendments that can be made to existing yards.

worksafe.vic.gov.au/safe-cattle-yards-livestock-loading-and-unloading.

Dairy Safely Home Safely – Ideas Bank

This quick catch was designed on farm to secure the gate quickly in pressure areas where cattle may push back.

The slot allows the catch to work even if there has been some movement in the gate level.

Diseases spread to people (zoonoses)

Cattle can carry and transmit diseases to humans (zoonoses) such as Leptospirosis, Q Fever, Salmonellosis and ringworm. Dairy farm workers, including vets and stock carriers, can be exposed to these diseases.

Zoonotic diseases can be contracted from both ill and clinically normal animals.

Leptospirosis is primarily caught by contact with urine from infected cattle. Q Fever can be contracted from urine or birthing fluids and placenta, blood, saliva, milk or faeces of infected cattle. Q Fever organisms can become airborne in dust and survive for long periods in the environment. Salmonellosis gastroenteritis can be contracted from infected faeces or milk. Ringworm is a skin fungal infection.

Human ill-health associated with zoonotic diseases can be severe, long term and debilitating. It is important farmers understand the risks and consequences and inform workers and others who may handle potentially infected livestock.

Best practice

1. Vaccinate all cattle against Leptospirosis. Set up an annual vaccination protocol for your herd – adults and young stock.
2. Encourage workers who handle cattle to have a test for Q Fever, and if they are negative, have the vaccination.
3. Avoid contact with urine and consider splash guards in dairies.
4. Wear protective clothing including gloves when assisting with calving, handling sick animals, or carcasses.
5. Practice and promote good general hygiene such as washing and drying hands before eating, drinking or going to the toilet.
6. Keep cuts and scratches covered with clean dressings.

Tip

Consider vaccinators with retractable needles and gloves to prevent needle pricks.

Tip

Use a sharps container to dispose of all needles and syringes used to administer veterinary drugs.

Learn more

For an overview of zoonotic diseases caught by people, see:

dpi.nsw.gov.au/biosecurity/animal/humans

Learn more

Q Fever can cause serious illness in humans. Some infected people have few symptoms, and others may develop a severe flu-like illness. Chronic infection can occur, which most commonly affects the heart (endocarditis) or causes a fatigue syndrome which can last for a long time. Q Fever infection in pregnant women can cause miscarriage and premature birth.

A vaccine is available for humans to protect against infection.

thepeopleindairy.org.au/announcements/q-fever-employers-are-responsible-for-protecting-staff/

health.nsw.gov.au/Infectious/factsheets/Pages/Q-Fever.aspx

Learn more

Leptospirosis affected people generally suffer an acute onset of headache, fever and occasionally conjunctivitis, vomiting or abdominal pain.

An effective vaccine is available for dairy cows. This has lessened the incidence of this disease in dairy areas over the last few years.

farmerhealth.org.au/2014/03/21/leptospirosis

Farm policy on safe animal handling

Animal handling occurs every day on a dairy farm. This policy is designed to minimise the possibility of injury to everyone on the farm as a result of handling livestock.

Heading	Policy
Purpose:	This policy is in place to ensure that when livestock on our farm are handled it is without risk to workers and others
Who does it apply to:	Staff and contractors and any visitors handling stock
Consequences of not complying with this policy:	Failure to follow the processes outlined in this policy may lead to disciplinary action, dismissal or termination of contract. If any circumstance arises that would make it difficult to comply with this policy, immediately contact: _____
Background:	Cattle are large and sometimes unpredictable animals. Many farm injuries happen when workers are handling livestock. Injuries can result from being kicked, stood on or crushed. More serious injuries such as broken bones also occur and some can be fatal. It is our intention that this business will provide an environment that is as safe to work as practicable.
Farm rules:	On this farm to reduce the risk of injury when handling cattle the following has been established: • The stock handling facilities and the dairy are well designed, but the operators should exercise care when working around cattle. • Workers have an understanding of animal behaviour and low-stress handling techniques. They should move quietly and calmly around stock. • Aggressive animal handling, including hitting animals, will not be tolerated. • Workers are expected to take particular care when working around bulls or cows with calves, as these animals can be unpredictable. • Workers should not work alone when loading cattle for transport. • Gloves are provided and should be worn when performing any procedures that may involve contact with cattle body fluids (for example assisting calving cows). • Workers are trained in correct procedures for animal management such as assisting calving, treating sick or lame cows. Only workers who have received this training should undertake these activities. • Sharps disposal containers are provided and must be used for disposal of all needles and syringes used to administer veterinary drugs. • Sick animals require extra attention. They require shelter, treatment, feed and water. Workers should take care when handling sick animals because they are likely to be stressed and less predictable. • Should an animal require euthanasia, workers should seek help from the manager to ensure swift action. • All animals requiring euthanasia to be euthanised by trained personnel. • The herd is vaccinated against leptospirosis. • We encourage all employees to discuss vaccination against Q Fever with their medical practitioner.
Farm commitment to safe animal handling:	We are absolutely committed to reducing the risk of injury associated with handling livestock on this farm and the following rules apply to all workers. We wish to reinforce the following key rules: 1. Animals are to be handled calmly and quietly. No animals are to be hit. 2. Damage to, or malfunction of, cattle handling facilities to be reported immediately to: _____ 3. Injuries or 'near misses' to be reported in the Incident/Near-miss record in the Dairy Office and be reported as soon as possible

Staff member/contractor acknowledgement

I have received a copy of this policy and have read understood and agree to comply with it.

Name:

Signature: Date:

Remarks or comments:

*** Keep a copy of this document for at least 2 years ****

Standard Operating Procedure (SOP)

Working with livestock

Dairy farmers are in very regular contact with livestock including dairy cows, bulls and calves. The risk of injury is high due to the potential for being crushed or kicked when in close proximity. Basic livestock handling knowledge and skills are necessary.

Job steps	Photographs	Safety/Quality/Environment
BASIC FACTS FOR DAIRY COWS: Agitated cattle are a risk; make sure the whole cattle handling experience is a pleasant one for you and the cattle. a. Dairy cattle are usually docile and predictable but can change to become unpredictable quite quickly. b. Most herds have a range of cattle with different behaviours, including docile, flighty, nervous and aggressive types. c. Even docile animals can change temperament especially if stressed or isolated. d. Cows with young calves can become aggressive. e. Different breeds often have different temperaments. f. Horned cattle increase the risk of injury. g. Always move quietly and calmly around stock.		**Safety** – Your actions can affect dairy cow behaviour **Remember:** 1 Know your cattle. 2 Keep cattle calm. 3 Assess the type of stock and their behaviour. 4 Keep an eye on what's going on around you. 5 Know when to use your voice. 6 Check the yards for hazards before working cattle 7 Wear safety footwear. **NEVER:** a. handle cattle if you do not feel confident in handling them safely b. stress or arouse cattle unnecessarily c. turn you back on a cow when approaching and handling her calf d. suddenly enter the animals 'blind spot' e. rush into the animals 'flight zone' f. beat or shout at cattle unnecessarily.
BASIC FACTS FOR BULLS: a. Bulls are more unpredictable and dangerous than dairy cows. b. Bulls are often more aggressive during mating season. c. Bulls are extremely dangerous when fighting with other bulls. d. The older the bull, the more dangerous it can become.		**Safety** – a. Never trust or turn your back on a bull b. Ensure two people are present when handling bulls c. Avoid working bulls with other bulls around. d. Always work with bulls in the same yard and ensure they are excluded from dairy yards
BASIC FACTS FOR CALVES: a. Calves weigh between 30–100kg, so can cause major safety issues for adults and children. b. Any cow, but particularly a beef cow, is often aggressive just after calving and is not to be trusted. c. The younger the calf, the more dangerous the mother. d. Calves can kick, head-butt or knock over inexperienced handlers in their haste to be fed. e. Calves can be responsible for disease transmission to humans. The possible zoonoses from calves include cryptosporidium, campylobacteriosis, salmonella and E. coli.		**Safety** – a. Avoid lifting calves if possible as 30–100kg poses a major manual handling risk in regard to back and shoulder injury. It is difficult to anticipate sudden changes in behaviour when holding a calf. b. Avoid situations where you come between a cow and her newborn calf without some form of barrier to protect yourself. c. Always wash your hands after handling calves to prevent picking up an infection.

Working with livestock – example continued

Job steps	Photographs	Safety/Quality/Environment
WORKING WITH CATTLE IN THE DAIRY: Working with cattle in the dairy is a key role on the farm and must be undertaken with care. See the safety tips.		Safety – **NEVER:** a. put your head under a kick rail b. put your arm between a rail and an animal (particularly kick rails in the dairy) c. put your hand flat on the dairy platform d. stand between a gate and a fence when holding the gate.

Farm records

Farm records

Farm chemicals

Farm safety guidelines

Chemicals are used on dairy farms for cleaning, treating animals, controlling pests, applying as fertilisers and adding to feed. Other chemicals on farms include fuels, oils and various gases. Asbestos is also present on many farms. Exposure to workers and others can occur during transport, storage, use and disposal of these chemicals.

Many chemicals have the potential to cause harm to human health and safety. Acute health effects include headaches, nausea or vomiting and skin injuries. Chronic health effects can include asthma, dermatitis, nerve damage or cancer. Chemicals that are flammable, corrosive, explosive, chemically reactive or oxidising may also harm workers with more immediate effects such as burns.

Each hazardous chemical has a Safety Data Sheet (SDS) with information and instructions on how it can be stored, handled and used safely in the workplace.

There is a significant amount of regulation around management of hazardous chemicals on dairy farms. This topic focuses on the impact of chemicals on people. Use the resources in your Farm Safety Manual to ensure you are managing a safe workplace and fulfilling your legal obligations.

Step-by-step – Setting up safety for use of chemicals on your farm

1. Getting started

- [ ] **Read through this information pack**
- [ ] Complete the farm chemicals **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of things to do and **set a date** to have each thing completed in the **Action Plan.**
- [ ] Read through the information quickly again.
- [ ] Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).

2. Assessing the risks around use of chemicals on your farm

- [ ] Task someone with making a list of all the chemicals used on the farm and where they are located.
- [ ] Obtain the **Safety Data Sheet (SDS)** for each chemical and review the classification, storage, handling and use guidelines
- [ ] Make any required **structural changes** you have identified and buy any **gear or Personal Protective Equipment (PPE)** needed.
- [ ] Arrange any ChemCert or other **training** needed.
- [ ] Find out if you have **contractors** who are better equipped to use these chemicals.

3. Setting up your policy, processes and paperwork

- [ ] Set up a **Register of Hazardous Chemicals** with each SDS attached.
- [ ] Set up a **storage Manifest** (if a Manifest is required).
- [ ] Set up relevant **Standard Operating Procedures** (including use of PPE) for tasks involving hazardous chemicals.
- [ ] Put a copy of the Register and SOPs with the documents you use to **induct new staff or relevant contractors.**
- [ ] Go through the arrangements you now have in place with workers or family at your next **workplace meeting**.

Sleep well – job well done.

Resources in this section

- **Information** about hazardous chemicals on dairy farms and legal obligations
- **Safety Self-Assessment** for managing hazardous chemicals
- **Template for Hazardous Chemical Register.**

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety**
You can edit the templates to suit your farm.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For farm chemicals	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Hazardous chemicals identified and in Register	☐ Not done	☐ Not complete or up-to-date	☐ Register complete and up to date
Dangerous goods identified and storage manifest completed (if required)	☐ Not done	☐ Not complete or up-to-date	☐ Manifest (if required) complete and up to date
Safety Data Sheets	☐ Not obtained	☐ Not up-to-date or easily available for all chemicals	☐ All up to date and easily available where chemicals are used
Asbestos audit and management plan	☐ Not done	☐ Audit done but plan not implemented	☐ Audit done, plan fully implemented
Chemical storage areas including fuels and chemicals in use	☐ No particular areas set up	☐ Some separate, purpose-built	☐ All purpose-built and compliant with regulations
Warning signage	☐ None	☐ Some in place	☐ All in place and correct for storage and use areas
Access by children and unauthorised people	☐ Easily could happen	☐ Some restriction	☐ All restricted
Farm chemicals application	☐ No reference to SDS	☐ Some according to SDS	☐ All according to SDS
Accredited training for farm chemical use	☐ None	☐ Some	☐ Must be completed (with evidence) before being allowed to do that work
Farm inductions for new staff	☐ Farm chemicals not included	☐ General warnings	☐ Farm chemicals and relevant safety processes identified
Personal Protective Equipment (as specified by the SDS)	☐ None, or not in working order	☐ Some available, not always used	☐ Available, in good condition and working order, always used
Restriction of eating, drinking, smoking while handling chemicals	☐ None	☐ Sometimes	☐ Always
Supervision to ensure safety during work	☐ None	☐ Sometimes	☐ Always
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up to date
Reporting accidents and incidents	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on, including notifications required by law
Emergency response plans	☐ None	☐ Only for one type of emergency	☐ In place for all emergencies

Hazardous chemicals

Exposure to workers and others can occur during transport, storage, decanting, mixing, use, cleaning and disposal of hazardous chemicals.

Critical factors to consider in all aspects of safe chemical handling are understanding what you need to use, and how to use it.

Advice from qualified experts is important to determine if chemicals are needed (e.g. factory field officers or chemical suppliers for dairy detergents, agronomists for pasture and crop treatments and veterinary officers for animal treatments).

The Safety Data Sheet (SDS) is a document that provides detailed information about each hazardous chemical. By following the information and instructions in the SDS, all chemicals can be stored, handled and used safely in the workplace.

Chemical classification

The first step in managing risks associated with chemicals is to identify all the chemicals that are used, handled, stored or generated on the farm and determine if they are classified as hazardous chemicals.

Each agricultural and veterinary chemical product available has been assessed to determine if it can cause harm to human health and safety. This involves the identification and evaluation of the physical properties of the chemical, along with its health effects.

If it is assessed to be hazardous, the chemical is then classified according to an international system. It is the classification of a hazardous chemical that determines what information is communicated on the label and the Safety Data Sheet.

Chemical hazards

In relation to chemicals, a hazard is a set of inherent properties of the substance, mixture, article or process that may cause adverse effects to people, animals or the environment.

There are two broad types of hazards associated with chemicals which may present an immediate or long term injury or illness to people. These are:

- **Health hazards** – These are properties of a chemical that have the potential to cause adverse health effects. Exposure usually occurs through inhalation, skin contact or ingestion. Adverse health effects can be acute (short term) or chronic (long term). Typical acute health effects include headaches, nausea or vomiting and skin irritation. Chronic health effects include asthma, dermatitis, nerve damage or cancer.
- **Physicochemical hazards** (often known as Dangerous Goods) – These are physical or chemical properties of the substance, mixture or article that pose risks to workers other than health risks. They arise through inappropriate handling or use and can often result in injury to people and/or damage to property. Examples of physicochemical hazards include flammable, corrosive, explosive, chemically reactive and oxidising chemicals.

Many chemicals have both health and physicochemical hazards.

Tip

How to tell if a chemical is classed as hazardous?

Always consult the product label and relevant SDS. If a chemical is hazardous, it must have a SDS and the manufacturer or supplier must provide you with a copy. Section 2 of the SDS will tell you if the chemical is hazardous.

Other indications are that the label of the product includes:

- diamond-shaped warning pictograms (as below).
- signal words **'Danger'** or **'Warning'**.
- hazard or precautionary statements such as **'Toxic if swallowed'** and **'Wear eye protection'**.
- risk or safety phrases such as **'Harmful if swallowed'** and **'Keep out of the reach of children'**.

A risk assessment is not mandatory for hazardous chemicals under the WHS Regulations (except in specific situations, for example when working with asbestos).

However, a risk assessment is the best way to:

- identify which workers are at risk of exposure
- determine what sources and processes are causing that risk
- identify what kind of control measures should be implemented
- check the effectiveness of existing control measures.

Where the hazards and associated risks are well-known and have well established and accepted control measures, it may not be necessary to undertake a risk assessment, for example, where there are a small number of chemicals in a workplace and the hazards and risks are well understood.

Documenting risk assessments is not mandatory, but may help when reviewing where improvements can be made and risks controlled more effectively.

Learn more

Guidance on for Managing Risks of Hazardous Chemicals in the Workplace

safeworkaustralia.gov.au/doc/model-code-practice-managing-risks-hazardous-chemicals-workplace

Specific guidance including for risk assessments for hazardous chemicals: see compliance codes for hazardous chemicals in your jurisdiction, see safeworkaustralia.gov.au/whs-authorities-contact-information

Dangerous goods, including signage information

worksafe.vic.gov.au/resources/code-practice-storage-and-handling-dangerous-goods

By law, the person conducting the business in any workplace has serious obligations to manage risks associated with hazardous chemicals.

WHS regulations require that you must:

- identify reasonably foreseeable hazards that could give rise to the risk
- eliminate the risk so far as is reasonably practicable
- if it is not reasonably practicable to eliminate the risk, minimise it by implementing control measures in accordance with the hierarchy of control
- maintain the implemented control measures so that they remain effective
- consult, so far as is reasonably practicable, with workers who are (or are likely to be) directly affected by the chemicals.

The regulations require that you must:

- prepare a **register of all hazardous chemicals** on the farm and keep it up-to-date
- ensure that the **current Safety Data Sheet (SDS)** for each hazardous chemical is readily accessible by workers
- prepare a **manifest of all Schedule 11 chemicals kept above threshold volumes** and keep it up to date.

The regulations also require you to:

- store chemicals as per the SDS, with appropriate signage
- maintain correct labelling
- have a spill containment system in place if there is the risk of a spill or leak
- ensure that equipment is available for use in an emergency
- provide relevant information, training, instruction and supervision to workers
- provide appropriate personal protective equipment (PPE).

Note: there is also a regulation that requires workers, so far as they are reasonably able, to wear PPE in accordance with the information, training and reasonable instruction they have received.

By law, you are responsible for all the people who use or may be affected by hazardous chemicals on your farm.

Best practice

1 Consider whether there are safe non-chemical alternatives. For example:
   - use of pressure washers instead of chlorine chemicals for algae control on concrete
   - mechanical removal of weeds
   - biological control of pests
2 If a chemical is to be used, select a chemical or application that will achieve the same result with less risk to users, others and the environment. For example:
   - substituting a highly flammable liquid with one that is less or non-flammable or combustible
   - using a product in paste or pellet form rather than as dust or powder
   - purchasing liquids in ready-to-use formulations and container sizes instead of decanting from large containers and mixing.
3 Separate people from the chemicals by distance or barriers to prevent or minimize exposure. For example:
   - using closed systems such as those available for cleaning vats and milk lines
   - isolating chemical application in one room with access restricted to properly protected personnel
   - using a cabined tractor fitted with charcoal filters when applying chemicals to pastures or crops.
4 Set up purpose-built storage sites that, for example: separate chemicals, contain spills, provide ventilation (see section below on Storage).
5 Set up and regularly review the documents required by law:
   - obtain the current SDS for each chemical
   - establish and maintain a register of the hazardous chemicals, with the SDS for each chemical attached
   - establish a storage manifest for Schedule 11 chemicals where the storage quantities exceed the prescribed limits
   - (See the sections below on SDS, Register and Manifest for more details.)
6 Routinely review chemical use and storage and dispose of unwanted chemicals and containers.
7 Ensure each chemical is stored and used according to the instructions in the SDS.
8 Develop safe work procedures for hazardous chemicals (e.g. use of acids and alkalis).
9 Restrict use of hazardous chemicals to authorised and trained people only.
10 Clean up spills immediately.
11 Always consult the SDS for the required PPE when handling chemicals.
12 Establish emergency response plans and provide training in the emergency responses.

Tip

A pest control program should always consider prevention, effectiveness of the control, impact on the environment and the impact on the user, others and the consumer. If a chemical is decided as the best means of treatment, then the safest chemical should be selected.

All managers, share farmers and supervisors should consider undertaking Integrated Pest Management awareness training and ChemCert training or equivalent.

For more information on Integrated Pest Management see:

epa.sa.gov.au/files/477372_guide_pesticides.pdf

Tip

Encourage all workers to report any incidents and 'near misses' relating to farm chemicals. This enables you to investigate hazards before they lead to health or safety problems. A positive, responsive attitude by supervisors and managers is essential to have this type of reporting become part of the safety culture on the farm.

The Safety Data Sheet (SDS)

The SDS provides detailed information about a hazardous chemical, including:

- the identity of the chemical product and its ingredients
- the hazards of the chemical including health, physical and environmental hazards
- physical properties of the chemical, like boiling point, flash point and incompatibilities with other chemicals
- safe handling and storage procedures for the chemical, including required PPE
- what to do in the event of an emergency or spill
- first aid information, and
- transport information.

The SDS will tell you how to eliminate or reduce the risks associated with the use of the hazardous chemical.

The SDS is available from the product manufacturer or supplier. Most can be downloaded. Manufacturers and suppliers are required to update each SDS at least every five years, so check periodically to ensure you have the most up-to-date SDS on hand.

By law, you must have the current SDS for each hazardous chemical readily accessible by workers. This can be hard copy or electronic if workers have ready access to a computer at work.

Tip

Use the SDS for each chemical when inducting or refreshing workers who will be using the chemical. In most cases, the SDS will contain more detailed and up-to-date information about a hazardous chemical than appears on the label.

Learn more

Understanding Safety Data Sheets for Hazardous Chemicals

safeworkaustralia.gov.au/safety-topic/hazards/chemicals/safety-data-sheets

Register of hazardous chemicals

WHS regulations require that a person conducting a business or undertaking must ensure that a register of hazardous chemicals at the workplace is prepared and kept up-to-date.

All hazardous chemicals that are stored, handled or used on the farm must be listed on the register except where they are in-transit or consumer products:

- Hazardous chemicals are considered to be in-transit if they are not used in the workplace and are not kept at the workplace for more than five consecutive days.
- Consumer products are those that are packed primarily for use by a household consumer and are used in a manner consistent with normal household use. Note: chemicals not classified as hazardous chemicals do not require SDSs to be kept and do not need be included in this register.

The register must be readily accessible by workers involved in using, handling or storing hazardous chemicals and to anyone else who is likely to be affected by a hazardous chemical at the workplace. Registers may be kept electronically provided workers have ready access to a computer. Otherwise a hard copy should be kept in the location where chemicals are mostly used.

If you do not already have a Register of Hazardous Chemicals, download the template on The People in Dairy website or use the hard copy in your Farm Safety Manual.

Manifest of Schedule 11 hazardous chemicals

WHS regulations require that a storage manifest is required where hazardous chemicals that are dangerous goods are present at the workplace and where their quantities exceed specified threshold amounts.

The manifest is intended primarily for emergency services personnel to use when they are responding to an emergency situation at the workplace.

A manifest is different from the register of hazardous chemicals. It is required to contain additional information including the hazard classes and categories of the hazardous chemicals and details of the type, size and locations of containers present at the workplace.

If you have Schedule 11 hazardous chemicals in quantities that exceed the thresholds, there is an example on The People in Dairy safety site to help you prepare your own manifest.

Learn more

For further information about requirements relating to manifests, refer to the *Managing risks of hazardous chemicals in the workplace* Code of Practice. See:

safeworkaustralia.gov.au/chemicals#codeguide

safeworkaustralia.gov.au/doc/model-code-practice-labelling-workplace-hazardous-chemicals

By law

Providing information, training, instruction and supervision

WHS regulations require that a person conducting a business or undertaking must ensure that information, training and instruction provided to a worker is suitable and adequate having regard to:

- the nature of the work carried out by the worker
- the nature of the risks associated with the work at the time the information, training or instruction is provided, and
- the control measures implemented.

You must also provide any supervision necessary to protect workers from health and safety risks arising from the work at the workplace, if the worker:

- uses, handles, generates or stores a hazardous chemical
- operates, tests, maintains, repairs or decommissions a storage or handling system for a hazardous chemical, or
- is likely to be exposed to a hazardous chemical.

Learn more

ChemCert is an industry-based non-profit organisation provides face-to-face and online training, up-skilling and industry accreditation for users of Agricultural and Veterinary (AgVet) chemicals.

For more information on legislation about AgVet chemicals and relevant training, see:

chemcert.com.au/about-chemcert

Source: Dairy Australia

Storage

By law

Personal protective equipment (PPE)

WHS regulations require that if PPE is to be used at the workplace, the person conducting the business or undertaking must ensure that the equipment is:

- selected to minimise risk to health and safety
- suitable for the nature of the work and any hazard associated with the work
- a suitable size and fit and reasonably comfortable for the person wearing it
- maintained, repaired or replaced so it continues to minimise the risk
- used or worn by the worker, so far as is reasonably practicable.

Regulations also require that a worker must, so far as reasonably able, wear the PPE in accordance with any information, training or reasonable instruction.

Tip

PPE is usually made to an Australian Standard.

Ensure the correct PPE is selected by referring to the SDS and cross checking. Certain chemicals often prescribe particular PPE (e.g. glove types).

Correct storage of chemicals reduces the potential of exposure to workers, visitors, children, animals and the environment. Locked storage prevents both unauthorised access and theft.

Health and safety, Agvet and environmental regulations require chemicals to be stored according to the relevant SDSs. Most dairy farms require a number of different chemical storage areas, including for chemicals that must be refrigerated. Purpose-built facilities should be constructed or purchased for each of these areas.

When determining how chemicals are to be stored, consideration should be given to:

- type of chemical
- information provided on the label and in the SDS
- classification of the chemical i.e. dangerous good and/or hazardous substance
- container size and total volumes and or weight in storage and in use
- application methods, e.g. manual decanting or closed dosage systems
- access for contractors for supply, connection and removal of empty containers, e.g. vat and milk line cleaning chemicals, LPG gas bottles
- exposure of the site and methods to prevent unauthorised and child access.

Chemicals in use, such as acids and alkalis, should be isolated to prevent unauthorised, incidental or child access and should include separation of acids and alkalis, barriers that prevent hand or finger access, spill containment within the barriers, and ease of access to move drums in and out of storage.

Best practice

Elimination of the need for storage

1 Consider having relevant chemicals delivered the day they are to be used.

2 If a contractor is used, for example to spray pastures, request that they bring and take away the chemicals, thus eliminating any storage requirements on farm.

3 Dispose of all unwanted and out-of-date chemicals.

Tip

Disposal of unwanted chemicals and empty containers may be possible through your local shire or by a privately engaged contractor.

A national program called ChemClear will arrange pick up under certain conditions.

For further information go to chemclear.org.au/chemical-disposal/

Engineering

4 Construct storage facilities for chemicals with the following features:

- materials that are non-combustible and non-porous, including floors, walls and shelves
- containment for spills (bunding) and an interceptor trap
- good ventilation
- protection from moisture
- sufficient room for maximum quantities to be stored, including bulk containers, 1000 litre shuttles and pallet loads
- security and signage
- an appropriate spill clean-up kit
- a fire extinguisher
- locations for SDS, emergency documents and PPE
- an emergency deluge shower, hand and eye wash facility.

Administrative Controls

5 Have all SDSs available at the storage facility (and protected from contamination).

6 Separate incompatible chemicals such as acids and alkalis (check the SDS to determine which ones).

7 Separate chemicals from food stuffs.

8 Store chemicals in original correctly labelled containers – NEVER in drink containers.

9 Check all containers for leaks.

10 Put up relevant signs - 'Chemical storage' and additional signs according to what is stored and the quantities stored.

11 Follow procedures for disposal of empty chemical containers, e.g., triple rinse, use DrumMuster service.

Personal Protective Equipment (PPE)

12 Use the PPE required by the SDS when handling chemicals in storage or at application.

13 To avoid contamination of PPE, locate it adjacent to the chemical storage facility or in a secure plastic tub within the store.

Learn more

ChemCert guide for storage of hazardous chemicals:

chemcert.com.au/news/storage-guide-for-hazardous-chemicals/

Bunding guidelines for storage facilities

epa.sa.gov.au/files/47717_guide_bunding.pdf

Tip

Purpose built chemical storage facilities are commercially available including from:

instaco.com.au/utility-sheds/chemical-storage-sheds/

shadycharacters.com.au/product/chem-shed

greataussieshadesheds.com.au/chemical-sheds/

Tip

Chemicals requiring refrigeration must not be stored with food stuffs or drinking water.

Have a separate, labelled fridge (bar type fridge for small quantities) for storage of vaccines and animal treatments and lock to prevent child and unauthorised access.

Sign clearly as 'Chemical Storage No Food Allowed'.

Tip

Keeping chemicals cool in extreme hot weather

Summer can be a tough time for farm chemicals. Heat can reduce the effectiveness of products and UV radiation can degrade plastics, possibly rendering containers unsafe.

For very hot weather:

- Check labels and SDSs and move heat-sensitive products into cooler storage areas
- Fit lockable screens so you can open exterior doors and windows to help improve airflow.
- Install an extractor fan to draw in cooler air, in addition to rooftop whirlybirds
- Always keep chemicals out of direct sunlight, or if containers can't be moved, cover them with a tarpaulin as a temporary solution

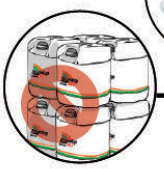
Single-skin sheds (such as shipping containers) heat up very quickly. A permanent solution is to install a temperature-controlled unit with insulation construction, to control extremes of heat and cold year-round.

ChemCert Storage Guide for Hazardous Chemicals

Chemical Shed 10 Point Guide

Fire & Weather Resistant Structure, chemicals protected from extreme heat and UV exposure

Ventilated (cross flow & roof exhaust vent), seek advice over the use of shipping containers



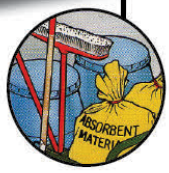
Well lit with strong metal shelving to prevent people stacking drums on top of each other

Fire extinguisher, first aid kit and PPE should be kept nearby and maintain a safety shower and eyewash station capable of 15 minute eyewash in the event of a pesticide splash into the eyes

Original Containers with intact legible label, never decant into food/beverage container

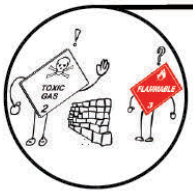
Lockable with a child proof latch and ***appropriate signage***

Bunded non slip concrete floor to contain 25% of total volume or 100% of the largest package



Spill kit should be kept inside the storage area suitable for the chemicals housed

Emergency plan with emergency contact numbers and SDS nearby, Poisons Information centre number and diagram of assembly area should be mounted near entrance.



Segregated & correctly stored, separate flammables from non-flammables by at least 3 metres and pesticides from animal food and feedstuffs/seed/fertilisers, out of direct sunlight and away from materials that burn readily like oils, hay, straw, old tyres, saw dust and tall dry grass. Solids should be stored above liquids.

Hazardous Chemical Storage

Federal - Make sure all Agvet chemicals stored carry an APVMA approval number
EPA - Waste management – spills, chemical and container disposal – Chemclear and drumMuster
WHS - Keep a register of all hazardous chemicals and their current (less than 5years old) safety data sheets (sds)

Larger quantities - placarding, manifests and notification

GHS Hazard class	*GHS Hazard category*	*ADG Class/ Packing Group*	*Placard quantity*	*Placard to display*	*Manifest Quantity*
Acute toxicity	1	6.1 PG 1	50 kg/L		500 kg or L
"	2	6.1 PG 11	250 Kg/L		2,500 Kg or L
"	3	6.1 PG 111	1,000 kg/L		10,000 Kg or L
As a general rule GHS flammable liquids, Skin corrosion and Oxidising liquids and solids require the same placard and manifest quantities as above but display their own respective placards.					

An industry safety initiative from ChemCert
www.ChemCert.com.au

For Local Courses
Freecall 1800 444 228

Farm chemical storage area checklist

- [ ] Is the storage area properly constructed?
- [ ] Is it in a lockable area? (preventing access by children and unauthorised persons)
- [ ] Is there sufficient bunding to retain a leak or spill? (25% of total volume stored)
- [ ] Is it resistant to fire?
- [ ] Is there protection from moisture?
- [ ] Is it adequately ventilated?
- [ ] Is there sufficient light? (natural or artificial)
- [ ] Are there clear warning signs posted on the outside?
- [ ] Are there materials available to control spills?
- [ ] Are all chemicals stored in their original containers?
- [ ] Do all containers have clear and legible labels?
- [ ] Are the Safety Data Sheets (SDSs) available nearby?
- [ ] Are all chemicals stored in accordance with label instructions and the SDS?
- [ ] Are incompatible materials (e.g. flammables and poisons) stored away from each other?
- [ ] Are food and drink prohibited in the area?
- [ ] Is a dedicated refrigerator available for chemicals that require refrigeration?
- [ ] Are appropriate fire extinguishers located nearby?
- [ ] Is there an emergency shower and eye wash located nearby?
- [ ] Are emergency contact numbers nearby? (Poisons information hotline 13 11 26, emergency services)

Tip

Incorrectly labelled or unlabelled containers

If you find a container that does not have a label or is incorrectly labelled, action must be taken to correctly label the container.

- Containers that have had chemicals transferred into them (decanted) in the workplace, and containers of chemical wastes need to be labelled correctly.
- If the contents of the container are not known, this should be clearly marked on the container, for example, 'Caution - do not use: unknown substance'. Such a container should be stored in isolation until its contents can be identified and, if it is then found to be hazardous, the container is appropriately labelled. If the contents cannot be identified, they should be disposed of in accordance with relevant local waste management requirements.

Bulk fuels

Diesel and unleaded petrol (ULP) must be located away from sources of ignition, with ULP at least 15 metres away. (If ULP and diesel tanks are next to each other, they are considered to be one storage and requirements for the ULP will apply). The surrounds should be free of combustible material including grass, trees and timber for a radius of at least three metres. A foam extinguisher close to the storage area is advisable.

Bulk fuel storage should have spill containment, be protected from vehicle damage and have secure and solid footings. Tanks should have a routine engineering assessment. Overhead tanks need step access with hand rails and platforms that are compliant with AS 1657.

To prevent unauthorised access, lock hoses or locate in a lockable open air compound.

LPG and compressed gas bottles

Gas bottles should be stored and transported in a vertical position to allow venting. Empty and full bottles that are not in use should be placed in racks in secure areas. Oxygen (oxidising compressed gas) and acetylene flammable-compressed gas must be stored away from ignition sources and combustible material in an external or ventilated area, with signage showing 'No smoking or open flames'.

Bottles in use should be chained vertically to walls or posts and protected from damage by vehicles or livestock. When moving bottles, strap them upright in a purpose-built trolley.

Tip

Using drums for fuel storage

- Engage a contractor to deliver drums.
- Use a trolley to move drums.
- Do not undertake splash filling of 200 litre fuel drums.
- Ensure earthing of small containers if decanting.
- Do not cut or weld empty fuel drums.

Tip

Using gas bottles

- After fitting LPG bottles, test for leaks with soapy water spray.
- Ensure gas regulators are regularly inspected and replaced/repaired if damaged.
- Inspect hoses regularly for damage, perishing and wear.
- Fit flash-back arrestors to the bottle end of oxy and acetylene hoses.
- Remove out-of-date LPG bottles (both 45kg and 9kg) from service.

Application

Tasks which involve applications of chemicals on dairy farms include:

- cleaning of milking machinery and vats
- treating algae on concrete
- teat spraying
- drenching
- vaccinations
- spraying of pasture and crops
- spot spraying of weeds.

All these tasks potentially expose the user and others to harmful substances.

Depending on the chemicals, exposure can have an immediate effect (such as burns caused by a violent reaction between acids and alkalis) or health effects which occur soon after exposure (such as skin irritations) or in the longer term (such as development of cancer with, for example, organophosphates).

When applying any chemical always consider how best to reduce the exposure to people, livestock and the environment. If existing application equipment, skills or PPE are not sufficient, consider engaging a specialist contractor to undertake the application.

Best practice

Engineering controls

1 Isolate the chemicals by using closed systems wherever possible. Examples include closed dosage and chemical transfer systems and enclosed decanting bottles.

2 Use cabined tractors with charcoal filters to apply pasture and crop chemicals.

Administrative controls

3 Provide training and supervision for all workers involved in chemical application.

4 Secure all chemicals during transport.

5 Calculate the amount of chemical required accurately, to avoid the need to dispose of unused sprays.

6 Ensure the mixing site has adequate ventilation.

7 Have at least 20 litres of water available for washing at the mixing and application sites.

8 Ensure no drinking, eating or smoking during mixing and application.

9 Ensure unauthorised persons are not present during mixing and application.

10 Ensure all chemicals in use cannot be accessed by children or unauthorised persons.

11 Maintain application equipment in good condition as per the manufacturer's guidelines. Always use gloves when cleaning spray nozzles.

12 If using a quad bike, ute, or side-by-side to spray or spot spray, ensure lids and applicators are secured to avoid splashing and accidental operation. Wash down after use.

13 Follow EPA and SDS recommendations for disposal of excess spray and rinsate.

14 Follow re-entry periods or withholding periods prescribed on the label or SDS after application.

15 Use PPE if entry to the application area must occur before the re-entry period has expired.

16 Ensure hands are washed before going to the toilet eating and/or smoking.

17 Develop an emergency response plan for transport, mixing and application.

Personal Protective Equipment (PPE)

18 Obtain and use relevant PPE as per the SDS,but remember it only protects the person wearing it.

19 Maintain PPE in good condition.

20 Wash any overalls or clothing separate from other clothing.

Tip

When selecting chemical gloves, consider the task as well as the chemical. Some tasks such as cleaning nozzles require feel, other tasks may potentially damage or rip the glove.

There are many options. Discuss the type of gloves with a safety equipment supplier, or see:

ansell.com/au/en/hazards/chemical-resistance

Learn more

Rinsate is produced as a result of rinsing drums or cleaning application equipment. The EPA (NSW) provide recommendations on managing rinsate:

pesticidestewardship.org/disposal/rinsate-and-spill-cleanup-materials/#:~:text=Rinsate%20is%20much%20more%20diluted%20than%20excess%20spray,rinse%20water%20is%20applied%20is%20a%20labeled%20site

Managing leftover chemicals

dpipwe.tas.gov.au/Documents/Guidelines%20for%20Managing%20Leftover%20Chemicals_Feb2014.pdf

Washdown and disposal pit

nre.tas.gov.au/agriculture/agvet-chemicals/guidelines-and-information-sheets/guidelines/washdown-area-and-disposal-pit-diagram

Asbestos

Asbestos may be present on dairy farms, for example in cement sheeting that lines vat rooms, as lagging around old hot water pipes or behind old power boards. Asbestos can also be found in other buildings and houses.

Asbestos becomes a health risk when its fibres are released into the air and breathed in. Breathing in asbestos fibres can cause asbestosis, lung cancer and mesothelioma.

If you suspect asbestos is on your farm you must manage the risk of exposure:

- engage a licensed contractor to undertake an asbestos audit of all facilities on the farm (this includes old/unused houses and sheds) and develop an asbestos management plan
- implement and document actions outlined in the plan.

Learn more

For more information about asbestos see:

safeworkaustralia.gov.au/duties-tool/construction/hazards-information/asbestos

Hazardous Chemical Register

A Hazardous Chemical Register is a list of all hazardous chemicals used, handled or stored on your farm.

You must keep the current Safety Data Sheets (SDS) with this register and make sure it is accessible to workers. The SDS will tell you if the chemical is hazardous, and how to use and manage it safely. The supplier of your chemicals should provide a SDS on request.

Contact the manufacturer or supplier for a copy of the SDS or for more details. Many companies also provide SDSs online.

Chemical name	Manufacturer *including Australian contact details*	SDS issue date (*must be <5 years)*	Maximum quantity held on site*	Comments

Hazardous Chemical Register continued

Chemical name	Manufacturer *including Australian contact details*	SDS issue date (*must be <5 years)*	Maximum quantity held on site*	Comments

Hazardous Chemical Register continued

Chemical name	Manufacturer *including Australian contact details*	SDS issue date (*must be <5 years)*	Maximum quantity held on site*	Comments

Farm records

Farm records

Water and effluent

Farm safety guidelines

Water and effluent are significant hazards on farms. On average, five children drown on Australian farms each year. Most are under the age of five and one-third are visitors. Drownings of adults also occur, especially when they are working with machinery near dams, ponds and channels or when maintaining infrastructure that is under or above water.

From The Australian magazine by Jeanette Severs **Nov-Dec 2016**

Effluent about more than just fertiliser

The safe use of effluent is about a lot more than applying urea and solids to pasture.

One person who has been tragically affected by unsafe effluent ponds in South Gippsland, Victoria, is contractor and dairy farmer, Kelvin Jackson. Mr Jackson's son, Andrew died 13 years ago. Andrew drowned in an effluent pond that he and Kelvin were pumping out and spreading for another dairy farmer.

"The tractor had moved to the edge of the waterline, on the soft edge of the pond, and it slipped into the effluent. Andrew drowned in that effluent pond because of the way it was built." Mr Jackson said.

Mr Jackson believes the machinery used to build effluent ponds is part of the problem. "Most ponds today are built by excavator, with very steep sides, he said. That increased the risk of slipping by stock as well as people. Instead, Mr Jackson advises an apron and a graduation of 3:1 on the pond bank. "It enables animals to walk out if they slip in," he said.

Kelvin Jackson beside an effluent dam on his dairy farm, where you can see the sloping side of the dam and the apron for machinery to sit on.

"And - although we don't want it happening again - a person who slip scene could get out or be helped out.

"An apron is very important. Sadly, ponds get built and there's not a lot of thought given to accessing the pond. Too often they are inaccessible by excavators."

"We can't cut corners because it's about people's health and safety."

Water use and effluent infrastructure can also present risks other than drowning such as:

- slips, trips and falls especially in yards and on edges of ponds and channels
- entanglement and manual handling injuries associated with pumps and agitators
- falls from heights on travelling irrigators
- physical injury from pressure washers and flexible hydrants when cleaning
- water contact with exposed power in the dairy or overhead power by irrigators
- contact with harmful gases produced by effluent.

As an employer or person conducting a business on the farm, you have a legal responsibility to manage all the risks to health and safety associated with water and effluent. Use these resources to ensure you comply with this requirement.

Step-by-step – Setting up water and effluent safety on your farm

1. Getting started

- [ ] **Read through this information pack**
- [ ] Complete the water and effluent **Safety Self-Assessment** (traffic lights) page.
- [ ] **Make a list** of things to do and **set a date** to have each thing completed in the **Action Plan.**
- [ ] Read through the information quickly again.
- [ ] Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).

2. Assessing the water and effluent risks on your farm

- [ ] Task someone with making a list of all the locations on the farm where there is water or effluent stored or used.
- [ ] Do a **risk assessment** of each water or effluent related risk – the activity and facilities used – and plan the control changes needed.
- [ ] Make any required **structural changes** you have identified and buy any **gear** needed.
- [ ] Arrange any **training** needed.
- [ ] Find out if you have contractors who can do some of the work required.

3. Eliminating or controlling the risks

- [ ] Set up your farm **Policy** on working with livestock and the relevant **Standard Operating Procedures** for tasks involving water or effluent.
- [ ] Put a copy of the Policy and SOPs with the documents you use to **induct new workers** or **relevant contractors**.
- [ ] Go through the arrangements you now have in place with workers or family at your next **workplace meeting**.

Sleep well – job well done

Resources in this section

- **Information** about water and effluent hazards on dairy farms and legal obligations.
- **Safety Self-Assessment** for water and effluent.

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety**
You can edit the templates to suit your farm.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For water and effluent	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Worker involvement and feedback about water and effluent safety	☐ Not involved	☐ Some information and discussion	☐ Fully involved in decisions and developing procedures
Dams, irrigation channels, effluent ponds, and larger solids traps close to the house fenced off to restrict access by children and others	☐ Not done	☐ Some done	☐ All done
Water storages such as tanks, wells, sumps, solid traps and pump wells securely covered and/or fenced off	☐ Not done	☐ Some done	☐ All done
Securely fenced child safe play area with self-latching gates within sight of the house	☐ Not available	☐ Area available but needs improvement	☐ Area well set up
Children supervised by an adult whenever in, on, or around water	☐ Not mandated	☐ Mandated but not always done	☐ Always done
Emergency response plans (should a drowning occur)	☐ Not developed	☐ Limited development and review	☐ In place and regularly reviewed
Guarding on moving parts of pumps and irrigators that may cause injury	☐ None	☐ Some but not all adequate	☐ All adequately guarded
Training in the safe use of high-pressure washers if used on the farm	☐ Not done	☐ Some but not all workers	☐ All workers trained
An effluent management plan that includes identifying and controlling health and safety risks to workers and others	☐ Not developed	☐ Limited development and implementation	☐ Fully developed and implemented
Ponds designed with gradual batters and wide embankments to enable safe access by machinery for desludging	☐ None	☐ Some	☐ All
Barriers or wheel chocks used if tractors are working close to ponds	☐ Never	☐ Sometimes	☐ Always, or machinery never near ponds
Safe procedures for pump and agitator maintenance (e.g. power locked out, done out of water, supervised if on water)	☐ Not developed	☐ Limited development and implementation	☐ Fully developed and implemented
Pond management to prevent build-up of manure crusts, manure gases and insects	☐ Not done	☐ Limited development and implementation	☐ Fully developed and implemented
Good hygiene practices when working with effluent	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Records of induction and training	☐ Not kept	☐ Some	☐ Complete and up to date
Reporting injuries and near misses	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on, including notifications required by law

Water hazards that can lead to drowning on dairy farms include dams, creeks, effluent ponds, solids traps, wells, stock water troughs, irrigation channels, drains and swimming pools. However, hazards can be small – young children have drowned in holes filled with water, such as post holes and excavation ditches.

Steep-sided or plastic-lined structures are particularly dangerous because it is difficult to climb out of them. Where possible, dams and ponds should not be constructed with steep sides and instead, have a slope that enables people to walk out.

Fencing off and covering water hazards is important to limit access. Effluent ponds should be fenced when they are constructed and dams should be fenced if practicable. Solids traps can be fenced off with swimming pool-type fences and gates, while sumps can be covered with steel safety grating.

Tractors and other machinery operated close to banks of dams and channels run the risk of sliding, tipping or rolling into the water. Drowning may occur if a person is injured or trapped in a cab or under the machine. Where possible, avoid having the banks of dams or ponds as laneways and minimise use of machinery close to their edges. Clay banks are often slippery and gravel added to top access areas provides more traction for machinery and pedestrians.

Workers required to maintain structures such as pumps and agitators that are in or on water are at risk. If these structures are not stable workers can fall off, get caught underneath and drown.

Other than drowning, serious injuries associated with water include:

- slipping on wet yards and dairy concrete
- tripping over water hoses, pipes and drains in and around the dairy
- entanglement with moving parts of pumps and irrigators
- falling from irrigators when undertaking maintenance
- being hit by flexible and moving wash down hydrants
- face and eye damage from irrigation nozzles or pressure washers when cleaning
- electrocution from energised irrigators if water is in contact with overhead power or if water is in contact with exposed power in the dairy.

Additional hazards associated with effluent systems include the production of harmful gases (sometimes in ways that create 'confined spaces' – see Topic Confined Spaces), exposure to potential pathogens (such as Q Fever in faeces), and breeding areas for flies and mosquitoes.

WHS Regulations require that a person conducting a business or undertaking must manage risks to health and safety relating to water and effluent systems on their farm. They must:

- Identify reasonably foreseeable hazards that could give rise to the risk.
- Eliminate the risk so far as is reasonably practicable.
- If it is not reasonably practicable to eliminate the risk – minimise the risk so far as is reasonably practicable by implementing control measures in accordance with the hierarchy of control.
- Monitor and maintain the implemented control measure so that it remains effective.
- Review, and if necessary revise, risk control measures to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

By law, you are responsible for all the people who come to the farm, including workers, contractors, tenants, visitors and children.

Tips

Emergency response plans should be in place and include:

- rescue lines and buoys fixed in dams and ponds
- communication systems at hand
- trained first aiders on the farm
- up-to-date first aid kits readily available
- confined spaces rescue procedures in place where relevant.

Water and children

Young children are naturally inquisitive and are attracted to water but do not understand the dangers that water poses. If a young child falls into water they may not be heard. A child can swallow water, sink and lose consciousness in less than a minute. Children under the age of five are at greatest risk.

Not all water hazards on the farm can be realistically fenced off or covered because of their size or the need for access by stock. Close supervision of young children is critical, but distractions occur for many reasons on a family farm, such as urgent assistance with a farm task, arrival of unexpected visitors, phone calls and attention to other family members. Children of visitors and tenants are also at risk.

For these reasons a 'safe play area' that has pool- type fencing and child resistant gates and latches is an important place to have for young children. (See the Topic on *Children, Visitors and Traffic* for more information about safety for kids).

Best practice

Isolation and engineering controls

1 Provide children with safe play areas that are escape-proof.
2 Fence around houses to restrict (and define boundaries) for children.
3 Fence off swimming pools.
4 Where practical fence off dams, effluent ponds and solids traps near houses.
5 Fit secure covers to wells, drains and tanks.
6 Fill in holes, ditches and post holes that fill with water.

Tip

Fences made with well strained chicken wire are more difficult to climb than plain wire, ring lock or hinge joint fences and are good options for around houses and large effluent ponds.

Administrative Controls

7 Develop a policy around workers bringing children to work.
8 Inform workers and visitors (include house renters and farm stay tenants) of the water hazards present on the farm.
9 Fit reminder signage to close gates on fences around safe play areas, around house yards and around fenced off water hazards.
10 Fit signage warning of relevant water hazards.
11 Ensure adult supervision of children when in, on or around water.
12 Have children undertake a water awareness program.
13 Have workers and others undertake CPR training.
14 Establish emergency response procedures.

Learn more

Farm Water Safety

royallifesaving.com.au/about/campaigns-and-programs/keep-watch

Royal Lifesaving: Wonder, Swim and Survive program

swimandsurvive.com.au/content_common/pg-swim-and-survive.seo

Swimming pool safety

royallifesaving.com.au/educate-participate/swimming/swim-and-survive

Tip

Features of an effective child safe play area.

A child safe play area should be securely fenced, without any water bodies or drowning hazards inside it, and with toys and equipment to make it a fun place for children to be.

See the topic on Visitors, Children and Traffic for details about creating a safe play area.

Other water-related hazards

Slips and falls

To control water-related slips and falls:

- Reduce slippery concrete surfaces with grooving, etching or sand blasting.
- Put non-slip surfaces in wet areas used frequently by workers.
- Cover sumps and drains that could be a trip hazard in the dairy.
- Have a regular high pressure water cleaning and or chemical treatment program to prevent algae build up on yards and walk-ways.
- Provide steps that are non-slip, free draining and have hand rails.
- Use non-slip gum boots.
- Lay out hoses against walls when not in use.
- Put up warning signs for temporary slip areas.

Hazards of high-pressure jetting systems

Common risks associated with high pressure water jetting systems include the water jet piercing the skin, being hit by flying debris, respiratory and eye damage and electric shock. Other hazards may include exposure to hazardous chemicals and noise. **Note: Regulations specify that pressure washers are not to be used on material that contains asbestos.**

To control hazards associated with high pressure jetting:

- Restrict access to the work area when pressure washing (to protect others).
- Maintain pressure washers to the manufacturer's recommendations.
- Provide training in safe use of pressure washers – including instructions not to use pressure washers on the body or face.
- Use protective eye-face wear, hearing protection, water-proof clothing and non-slip gumboots when pressure washing.

Learn more

Training workers
For guidance on managing the risks associated with high pressure water jetting and training workers, see:

safeworkaustralia.gov.au/doc/guide-managing-risks-high-pressure-water-jetting

Flood washing

Flood washing with high volumes of water can be enough to knock over workers and children and this operation should not be commenced until the area is clear of people.

High pressure hydrant systems discharge large volumes of water and their hoses and nozzles can fly around if not secured or handled by a trained and competent person.

Hazards of travelling irrigators

The hazards associated with travelling irrigators include exposure to high pressure water from end guns, electric shock from power sources including overhead power lines (or if the irrigator becomes energised during an electrical storm), falls during maintenance and contact with moving parts.

Moving parts

Moving parts on pumps and irrigators that may cause injury must be adequately guarded. See the topic on Fixed Plant for more information on machine guarding.

Tip

A guard is a physical or other barrier which prevents contact with moving parts or minimises access to dangerous areas of plant. Hands and fingers must not be able to reach through or around guards to contact moving parts.

Tip

Water and electricity are a bad mix:

- Do not site ponds or dams under powerlines.
- Consider having power for pontoon agitators on effluent ponds supplied by solar or wind sources rather than electricity from the grid.
- Always use an electrical lockout procedure before undertaking pump maintenance.
- Ensure you have working Residual Current Devices on power outlets in the dairy and that any power outlets on the farm that may be exposed to water have weather proof covers.

Learn more

For more information see other topics in your Farm Safety Manual:

- Confined Spaces
- Working at Heights
- Farm Chemicals
- Power and Electrical
- Fixed Plant

Dairy effluent systems

There are drowning and other hazards associated with most parts of the effluent management systems on dairy farms. The risk of drowning in effluent ponds can be high for people of all ages, especially children.

- **Effluent ponds** can be deep (up to eight metres), often with steep batters. If they are clay or lined with plastic they are easy to slip into and difficult to get out of. Poorly managed ponds often develop an organic crust that grows weeds and grasses. This gives an impression of a solid, stable surface that is likely to give way under foot and certainly will give way under the weight of machinery.
- **Floating pontoons with effluent pumps and agitators** are often not designed for workers to stand on to undertake maintenance. They are liable to tip over, trapping and potentially drowning the person.
- **Sumps and solids traps** are steep sided and are difficult to get out of if someone, especially a child, falls in.
- **Flood wash systems using recycled effluent water** can result in algae build-up in yards causing a slip hazard.
- **Manure hydrants and spreaders** can produce an airborne mist potentially containing pathogens.
- **Decomposing manure** can release a variety of gases including highly toxic hydrogen sulphide; ammonia which is an eye and respiratory tract irritant; methane which is highly flammable; and carbon dioxide which can displace oxygen leading to asphyxia. Poor practices in pond management can also increase the health risks associated with flies and insects.
- **Animal wastes** can expose workers and others to zoonotic diseases such as Q Fever and Leptospirosis (see topic on Working with Livestock).

Each farm should have an effluent management plan which covers construction, use and ongoing maintenance of all the relevant infrastructure. It should include safety guidance on pond siting, design and stability, batter slopes and embankment widths, safe access points, and pumping methods.

Learn more

Establishing and understanding an effluent management plan, see:

dairyaustralia.com.au/soils-and-water/effluent-management

Best practice

Substitution

- Use contractors with appropriate machinery and skills for cleaning and maintaining ponds.

Isolation and engineering

- Fence off ponds and large solids traps to prevent access by children and others, allowing sufficient space for safe machinery access.
- Cover sumps and drains to prevent child access.
- Construct ponds with gradual batters and wide embankments that will remain stable when machinery is used for maintenance.
- Minimise the extent to which tractors and machinery are used around ponds.
- Use solid barriers and wheel chocks when tractors are working close to ponds.
- Ensure pump and agitator pontoons are stable and have fall protection barriers fitted if maintenance is undertaken on the water. Provide anchor points for pontoons to improve stability.
- Ensure flood wash tanks are built on structurally engineered footings or foundations.

Administrative Controls

- Ensure ponds have signs warning of the risk of drowning and of unstable edges.
- Always provide supervision to those working near effluent ponds or on pontoons – don't allow workers to do these tasks alone.
- Pump out ponds regularly to reduce crust build-up.
- Develop a safe system for pontoon pump and agitator maintenance – preferably conduct maintenance out of the water.
- Establish an electrical lockout procedure before undertaking pump maintenance.
- If effluent water samples are required for analysis, avoid getting close to the edge by using long extension handled dippers.
- Avoid eating, drinking and smoking around the dairy and wash hands before doing so.
- Vaccinate cattle for leptospirosis.
- Test workers for Q Fever and encourage them to be vaccinated if test negative.

Personal Protective Equipment (PPE)

- Wear aprons, gumboots, eye protection and gloves when handling or working with effluent.
- Wear a personal flotation device if working on pontoons or on the edge of ponds.

Well-constructed stable pontoon with lifting point.
Source: DairyNZ Farm Dairy Effluent Systems

Tip

Control weeds around the edges with herbicides and/or grazing. Consider using goats and or sheep to graze pond surrounds instead of heavier cattle.

Learn more

Effluent and manure management - Dairy Australia

dairyaustralia.com.au/soils-and-water/effluent-management

thepeopleindairy.org.au/farm-safety/water-and-effluent

Building a safe dairy effluent system

agriculture.vic.gov.au/livestock-and-animals/dairy/managing-effluent/making-effluent-systems-safe

Farm records

Farm records

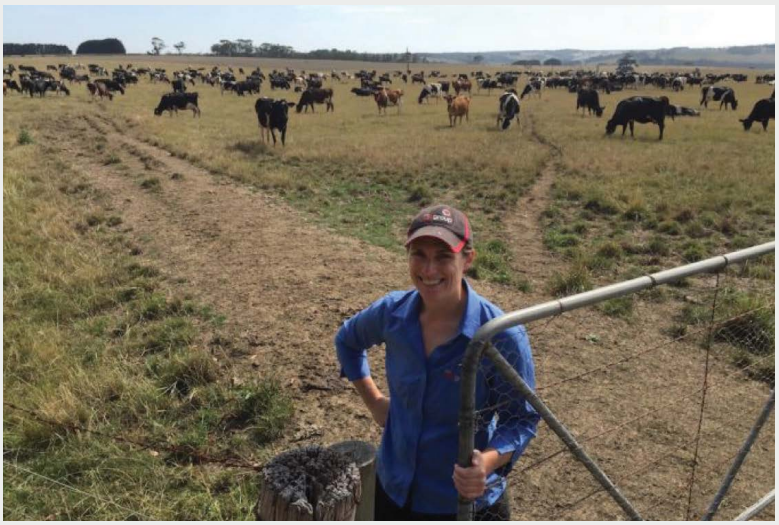
Working environment

Working environment

From The Vet Group | January 6, 2017

Is your dairy herd prepared for a bushfire?

Zoe Vogels



Prepare low risk areas for bushfire emergencies.

Recent bushfires in the region have provided us all with a timely reminder to sit down and plan what actions we will take in the event our properties are threatened by bushfire. It goes without saying that your safety and the welfare of your family must come first and the CFA along with other key Government agencies do a good job of communicating this. The information and tools available at **cfa.vic.gov.au** are relevant to everyone and I want to stress that they should be used to plan of the safety and welfare of your family.

What about the dairy herd?

I would encourage all farmers to take some time to sit down with family members, employees and even neighbours to talk through actions that can be taken to protect your herd from fire.

One of the most important decisions to make is where you will move your herd and young stock to on days of extreme or catastrophic fire danger – or should a fire be imminent in your area.

If it is safe to do so, your herd should be moved to a low risk area. This might include chewed-out crop paddocks, ploughed paddocks, irrigated paddocks, green summer crops or yards and small paddocks that are protected by laneways or firebreaks.

If you can't identify such an area – now might the time to create one. Maybe you could mow or, better still, plough a firebreak around a suitable site. While you're at it, why not do the same thing along roads, under powerlines and around haystacks and other buildings?

Step-by-step – Setting up for a safe working environment on your farm

This topic covers safety in the farm working environment across five distinct areas:

- **physical environment hazards**, including noise, dust, heat, cold and UV exposure
- **facilities for workers**
- **psychosocial hazards**, including contributors to workplace stress, fatigue, harassment, bullying and violence
- **injury management**, including health monitoring, injury reporting and compensation, health and safety communication
- **emergency responses**, including emergency response plans, facilities and equipment.

Getting started

Read through this information pack.	☐
Complete the working environment **Safety Self-Assessment** (traffic lights) page.	☐
Make a list of things to do and **set a date** to have each thing completed in the **Action Plan.**	☐
Set up your Policies and **Standard Operating Procedure**.	☐
Put a copy with the documents you use to **induct new staff**.	☐
Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).	☐

Resources in this section

- **Information** about safety in relation to working environment on dairy farms and your legal obligations.
- **Safety Self-Assessment.**

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety** You can edit the templates to suit your farm.

WHS regulations require you to assess and manage the risks to health and safety associated with the working environment of the farm. You must:

- identify reasonably foreseeable hazards that could give rise to the risk of an injury
- eliminate the risk so far as is reasonably practicable
- if it is not reasonably practicable to eliminate the risk, minimise it by implementing control measures in accordance with the hierarchy of control
- consult, so far as is reasonably practicable, with workers who are (or are likely to be) affected by the working environment

Self-assessment – Add your actions to your Action Plan at the back of this folder

For working environment	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Sources of hazardous noise	☐ Not identified	☐ Some identified	☐ All identified
Controls to reduce exposure to hazardous noise	☐ Not done	☐ Some done	☐ All in place and maintained
Appropriate hearing protection (where noise is controlled but still exceeds exposure standards)	☐ Not supplied or not worn	☐ Supplied, not always worn	☐ Always worn
Hearing tests for workers who regularly wear heating protection	☐ Not conducted	☐ Some done, not up to date	☐ All up to date
Sources of dust	☐ Not identified or controlled	☐ Some controlled, but not all	☐ All controlled
Dust masks (when exposed to dust)	☐ Not available	☐ Supplied, not always worn	☐ Always worn
Asthma management plans	☐ Not known if workers have asthma	☐ Some asthma plans in place	☐ All asthma plans in place
Risks of heat and cold stress and UV exposure	☐ Never addressed with workers	☐ Some info for workers	☐ All workers aware
PPE to protect workers from temperature extremes and UV exposure	☐ Not available	☐ Some available, not always used	☐ Available and always used
Extreme heat, cold and UV exposure	☐ Not considered in work schedules	☐ Sometimes considered	☐ Always considered
Sun screen and fresh drinking water	☐ Not readily available	☐ Sometimes available	☐ Always available for all workers
Access to appropriate facilities	☐ Not available	☐ Some available	☐ Always available for all workers
Physical hazards that may influence stress (e.g. noise, dust, fumes, poor lighting)	☐ Not identified or controlled	☐ Some controlled, but not all	☐ All controlled
Psychological hazards that cause significant work stress (e.g. bullying, harassment, issues with diversity, inclusion and respect, aggression and violence fatigue)	☐ Not identified or controlled	☐ Some controlled, but not all	☐ All controlled
Organisational factors such as job roles, responsibilities, supervision, resource allocation, reward and recognition	☐ Not considered in work planning	☐ Sometimes considered	☐ Always considered
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on

Self-assessment – Add your actions to your Action Plan at the back of this folder

For injury management on the farm	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
Worker's compensation insurance	☐ Not in place	☐ Some workers covered	☐ All workers covered
'If you are injured' poster	☐ Not displayed	☐ Up but not seen by all workers	☐ Clearly displayed for all
Notifiable incidents (by law to regulator)	☐ Not understood or reported	☐ Understanding but not clear action	☐ Well understood, would be reported
System for reporting hazards and near-misses by all workers	☐ Not in place, not encouraged	☐ Some involvement, not clear	☐ Well understood and active
System for recording injuries	☐ Not in place	☐ In place but not always used	☐ Register established and always used
Investigations of hazards, near-misses and injuries	☐ None	☐ Limited review and action	☐ All investigated and acted on
Records of investigations made and kept 5 years	☐ None	☐ Some	☐ All

For emergency responses on the farm	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
A written, emergency response plan, with clear procedures	☐ Not done	☐ Some parts done	☐ Complete and up to date
Farm managers, workers, supervisors and others including families instructed and trained in the procedures	☐ Not done	☐ Some instructed/ trained	☐ All people on the farm
Emergency contact details (e.g. fire, police, poison information centre)	☐ Not displayed	☐ Up but not easily accessible	☐ Clearly displayed, easily found
Site plan showing the location of fire protection equipment, first aid kits, emergency exits and assembly areas	☐ Not available	☐ Some parts done	☐ Complete and up to date
First aid facilities and emergency equipment relevant to the types of emergencies that may occur	☐ Not available	☐ Some available	☐ All available
Fire protection equipment suitable for the types of risks at the workplace	☐ Not available	☐ Some available	☐ All available
Workers and others trained to use emergency equipment	☐ Not done	☐ Some trained	☐ All trained
Emergency practice runs (e.g. evacuation drills) undertaken to assess the effectiveness of the emergency plan	☐ Never done	☐ Some aspects, rarely done	☐ Regularly done
Someone responsible for reviewing the emergency plan and updating workers and others of any changes	☐ No-one allocated this role	☐ Ad hoc role	☐ Someone clearly responsible
Follow-up	☐ None	☐ Limited review and action	☐ All issues acted on

Noise

According to Farmsafe Australia, approximately two-thirds of farmers have measurable hearing loss, with hearing levels 10 to 15 years worse than the general population.

Dairy farms can be noisy places. Sources of noise include mobile plant such as tractors, quad bikes and side-by-sides, and fixed plant such as vacuum pumps, compressors, augers, hammer and roller mills. Workshop equipment such as chainsaws, angle grinders and rattle guns all contribute to operator noise exposure. At milking, the level of noise can be exacerbated by steel sheds, the use of radios and the noise of cows as they move through the dairy.

The risk of hearing loss depends on both the noise level and the length of time the person is exposed to it. Hazardous noise, in relation to hearing loss, means noise that exceeds the exposure standard for noise in the workplace. Thresholds are often reached with an accumulation of noise sources. Noise-induced hearing loss can be gradual, over a period of time, or immediate if the noise is very loud.

Hazardous noise affects the functioning of the inner ear, which may cause temporary hearing loss. After a period away from noise, hearing may be restored. With further exposure to hazardous noise, the ear will gradually lose its ability to recover and the hearing loss will become permanent.

Permanent hearing loss can also occur suddenly if a person is exposed to very loud impact or explosive sounds. This type of damage is known as acoustic trauma.

Permanent hearing loss results from the destruction of hair cells in the inner ear. These cells cannot be replaced or repaired. Usually, hazardous noise first affects the ability to hear high-frequency (high-pitched) sounds. This means that even though a person can still hear some sounds, conversation will start to sound 'muffled' and they find it more difficult to understand what is being said.

Workers exposed to hazardous noise may also experience tinnitus (often referred to as ringing in the ears), which could become permanent.

Severe tinnitus may disrupt sleep, increase fatigue, reduce concentration, make people extremely irritable and lead to depression.

Noise is measured in decibels(dB(A)and dB(C)). There is a range in people's susceptibility to hearing loss from noise, but research shows that eight-hour average daily noise exposure levels below 75 dB(A), or instantaneous peak noise levels below 130 dB(C), are unlikely to cause hearing loss.

With progressively increasing noise levels, the risk becomes greater. The occupational exposure standard for noise protects most, but not all, people, so workplace noise should be kept lower than the exposure standard if reasonably practicable.

WHS Regulations set the occupational exposure standard for noise at 85 dB(A) for eight hours and a peak noise level at 140 dB(C).

If 85 decibels over an eight-hour period is exceeded then hearing loss is likely. Hearing loss can be immediate if the noise level exceeds 140dB(C).

Tip

Testing noise levels

Do your workers complain there is too much noise or they can't clearly hear instructions or warning signals? If you are standing a metre apart and need to raise your voice to be heard, the noise levels may be too high.

More accurate testing can be undertaken using a calibrated portable sound meter available at most electronic equipment outlets.

There are also smart phone apps that measure noise levels:

healthyhearing.com/report/47805-The-best-phone-apps-to-measure-noise-levels

The table below demonstrates the length of time a person without hearing protectors can be exposed before the standard is exceeded. For every three dB(A) increase in noise level, the exposure time is halved.

Equivalent noise exposures

Noise level (dBA)	Exposure time
80	16 hours
82	12 hours
85	8 hours
88	4 hours
91	2 hours
94	1 hour
97	30 minutes
100	15 minutes
130	0.9 seconds

Tip

Check noise ratings of operating machinery and equipment before purchase.

Manufacturers often list these ratings in operator manuals or indicate them on labels on the machinery or equipment.

By law

WHS regulations require:

- the noise a worker is exposed to at the workplace does not exceed the exposure standard for noise
- audiometric testing is conducted for any worker who is frequently required to use personal hearing protectors to protect.

Best practice

Consult with all workers who are or may be affected by exposure to hazardous noise on farm.

1 Identify the sources of hazardous noise.
2 Apply the hierarchy of control.
3 Eliminate the sources of hazardous noise, if practicable.
4 If not able to eliminate, then control by substitution, engineering isolation, safe work practice and PPE.
5 Arrange audiometric testing for workers and others who are required to wear hearing protection to protect against hearing loss.

Learn more

Selection of hearing protection should be based on:

- consulting with all workers who are or may be affected by exposure to hazardous noise on farm
- the amount of noise reduction required
- individual comfort (including relationship with other PPE or headwear)
- the environment in which it is to be used.

Hearing protection should not over-protect where there is a need to communicate with other workers, hear machine operation and audible warning devices such as reverse beepers.

Talk to your professional safety gear supplier for the appropriate hearing protection.

For guidance on selection and fitting of hearing protection visit:

au.prochoicesafetygear.com/hearing-protection

Learn more

Code of Practice – Managing noise and preventing hearing loss at work, July 2020

safeworkaustralia.gov.au/doc/model-code-practice-managing-noise-and-preventing-hearing-loss-work

safeworkaustralia.gov.au/sites/default/files/2020-07/model_code_of_practice_managing_noise_and_preventing_hearing_loss_at_work.pdf

Noise Exposure Ready Reckoner for specific time periods: refer Appendix D

Learn more

Audiometric hearing tests must be conducted within three months of the employee starting work and every two years thereafter. The initial test establishes the base line for each worker and the subsequent tests monitor and establish if hearing loss has occurred.

Refer to relevant state WHS Regulations – Noise

If hearing loss is detected, further investigation with the tester will be needed to identify factors that may have caused an increase in exposure to noise.

Hearing tests explained:
betterhealth.vic.gov.au/health/conditionsandtreatments/hearing-tests

A range of audiologists provide hearing tests for workers. Some have a portable booth; others require a visit to a regional centre. Shop around.

However, the test must be undertaken to the Australian Standard AS1269 Occupational noise management.

The general principles and examples of risk management for hazardous noise:

Elimination

- Dispose of or decommission noisy machinery.

Substitution

- Select and/or purchase equipment and plant that operates quietly.

Isolation/Engineering examples

- Enclose noisy plant such as vacuum pumps and compressors outside the dairy or in an insulated plant room.
- Direct exhausts on vacuum pumps away from the work area.
- Use well-sealed cabins on tractors and other mobile plant.
- Fit and maintain exhausts to combustion engines.
- Fit sound absorbing materials to walls and roofs of feed processing sheds.
- Fit rubber stoppers to automatic steel gates.
- Use plastic chutes instead of steel.

Administrative controls

- Identify sources of hazardous noise and measure the noise levels if they are not known.
- Ensure correct operation and scheduled maintenance of plant such as vacuum pumps, compressors, augers and grain crushers.
- Maintain exhausts and cabin seals of mobile plant.
- Provide exclusion zones for other workers and bystanders when operating noisy equipment.
- Regulate the volume of radios in the dairy.
- Rotate work tasks to limit exposure to noise.
- Display signs where hearing protection is required (e.g. outside plant room, on tractors without cabins, on specific items such as angle grinders).
- Arrange hearing tests (audiometric testing) for employees who are required to wear hearing protection.

Personal Protective Equipment (PPE)

- Provide and use hearing protection when noise controls are not sufficient. Hearing protection must meet the Australian Standard AS1270.2002

Dusts

On dairy farms, harmful organic dusts primarily occur from processing and handling of feeds such as hay, silage, grain and pellets. They may consist of plant, fungi, bacteria, material from livestock, rodents and insects (including excreta), chemical residues, soil and sometimes mould from spoiled hay or silage.

Grain dusts pose a risk of respiratory disease, particularly for people with asthma. Smokers are significantly more prone to respiratory problems. Dusts from cattle yards can also be hazardous because they may be contaminated with the bacteria that causes Q Fever. (See topic on Working with Livestock)

Sources of dust should be identified and reduced where possible. For example, dust from feed grain may be reduced by the addition of vegetable oils; fitting water sprinklers may be helpful to reduce dusts in yards.

Dust masks or respirators are necessary when working in feed sheds, handling mouldy hay or silage, or when cleaning out a dusty dairy or dusty machinery such as balers.

It is important that workers and others with asthma are identified and their exposure to dust minimised. All people with asthma who work on the farm should have an asthma management plan arranged with their doctor and ensure that they have ready access to their medication.

Tip

Could it be asthma? If you have wheezing, breathlessness, a feeling of tightness in the chest and or a persistent cough you should get this checked out as these may be symptoms of asthma.

asthma.org.au/about-asthma/understanding-asthma/

Learn more

Organic farm dusts – for more detailed information:

aghealth.sydney.edu.au/wp-content/uploads/2019/05/12.-Organic-Farm-Dusts.pdf

Learn more

Disposable dust masks are designed for use against dust, mists and fumes. They consist of a shaped piece of filter material held to the head by two straps (a mask with only one strap does not provide a close enough fit). When the mask loses its shape or when breathing resistance becomes too great the mask should be discarded. They should be replaced daily in very dusty conditions. These dust masks are not suitable for use with spray painting, toxic dusts or chemicals, or in oxygen-deficient atmospheres. Half-face masks can be used with reusable particulate filter cartridges.

For guidance on selection and use of respiratory masks:
au.prochoicesafetygear.com/respiratory-protection

The general principles and examples of risk management for dusts:

Substitution

- Use pellets instead of grain or add a dust-suppressing oil.

Isolation/engineering examples

- Locate the feed processing shed down wind of the dairy.
- Use longer drop tubes into feeders in the bail.
- Use enclosed blower tubes instead of augers.
- Fit dust extractors in sheds.
- Install water sprinklers at cattle yards.
- Use tractors with cabins when feeding out; harvesting; or cleaning yards, pads and calf sheds.

Administrative controls

- Stand away and upwind when auguring grain.
- Avoid manual handling of mouldy hay and silage.
- Monitor dust levels of feed grain and pellets and ensure adequate dust suppressant is added.
- Follow confined space entry procedures if entering silos.
- Do not smoke near dusty environments.
- Display signage where dust masks are required and smoking is prohibited.

Personal Protective Equipment (PPE)

- Provide and use dust masks or respirators where required.

Heat, cold and UV exposure

Dairy farming in Australia occurs in variable climates with temperature ranges from 45 to -10 degrees Celsius. Working temperatures can be a lot higher in sheds and a lot lower with wind chill factors. Exposure to temperature extremes can reduce work effectiveness by increasing fatigue and reaction times, and increase the risk of ill-health and accidents.

Heat stress occurs not only with increase in temperature but also with increase in humidity. Other factors that contribute to heat stress include:

- less air inside protective clothing
- radiant heat from fires and machinery
- inadequate shade
- cabined tractors without working air conditioners
- performing manual tasks under hot and humid conditions.

Symptoms of mild heat stress include fatigue, headaches, thirst and irritability. Extreme heat stress can lead to dehydration and heat stroke.

Sun exposure is the cause of about 99% of non-melanoma skin cancers and 95% of melanoma in Australia. Both melanoma and non-melanoma skin cancers can appear anywhere on the body, not just sun exposed areas. Businesses and workers need to be vigilant to the risks of working outdoors without adequate protection from the sun.

Tip

Motorcycle helmets used for quad bikes can be fitted with removable broad brims, neck flaps, ear coverage and UV visors.

Learn more

More information on UV exposure provided by the Cancer Council of Australia:

cancer.org.au/cancer-information/causes-and-prevention/sun-safety/be-sunsmart/sunsmart-at-work

Learn more

Heat stress and heat stroke information for workers:

safework.nsw.gov.au/hazards-a-z/working-in-extreme-heat

Information for employers: Managing risks when working in heat – Guidance Material

safeworkaustralia.gov.au/system/files/documents/1902/guide_for_managing_the_risks_of_working_in_heat_1.pdf

The general principles and examples of risk management for heat, cold and UV exposure:

Engineering examples in the dairy:

- Install insulation and reflective surfaces to sheds.
- Provide shutters, blinds and doors that can be opened or closed to control direct sunlight, wind and ventilation.
- Install air ducts or fans in the roof or end walls.
- Maintain air conditioning of cabined plant.
- Install heating at the cups-on station of rotaries (e.g. in the concrete).

Administrative controls

- Where practical rotate or schedule jobs to avoid extreme temperatures, humidity and peak UV exposure, especially if the tasks involve use of heavy PPE.
- Provide clean drinking water to work areas.
- Supply broad spectrum SPF 30+ sunscreen and promote its use.
- Provide information to workers on the risks of skin cancer and dehydration.

Personal Protective Equipment (PPE)

- For cold, especially when outside on bikes and quads, promote the use of gloves, beanies, lined safety footwear and insulated/thermal clothing and waterproof jackets and pants.
- For prevention of skin damage and cancer promote lightweight clothing including long pants and sleeves, broad brimmed hats and UV resistant wrap around safety-sunglasses.

Facilities for workers

The number of workers on the farm determines the size and type of facilities required.

Because the dairy is the focus of most of the work, it should include facilities for workers, or they should be close by. A dining area, access to drinking water, toilet(s), hand basins and shower(s) should be available at all times and maintained in clean, safe and good working order. Consumables such as soap, paper towel and toilet paper should be replenished regularly. Equipment and furniture such as toasters, fridges, lockers or seating should be maintained in good working order.

The number and type of toilets required depends on the number of employees, their gender and whether any employees have special needs or disabilities. Generally, separate toilets need to be provided in workplaces where there are both male and female employees. However, one unisex toilet may be provided in workplaces with both male and female employees where the total number of people who normally work at the workplace is 10 or fewer, or there are two or fewer employees of one gender. If there are employees with a disability that require an accessible toilet, this would need to be catered for.

WHS regulations place obligations on a person conducting a business or undertaking in relation to the work environment and facilities for workers, including requirements to:

- ensure, so far as is reasonably practicable, that the layout of the workplace, lighting and ventilation enables workers to carry out work without risks to health and safety
- ensure, so far as is reasonably practicable, the provision of adequate facilities for workers, including toilets, drinking water, washing and eating facilities.

Learn more

Code of Practice – Managing work environment and facilities

safeworkaustralia.gov.au/doc/model-code-practice-managing-work-environment-and-facilities

Tip

The lunchroom is also a good place to have a **dedicated health and safety noticeboard**. This promotes a positive safety culture on your farm. The noticeboard should not be cluttered with other information but be specific to health and safety. This could include the 'if you get injured at work' poster, your farm health and safety policy statement and hazard and incident reporting requirements.

Tip

Drinking water – an adequate supply of clean drinking water must be provided for workers at all times:

- free of charge
- at or below 24 degrees Celsius
- supplied in a way that they do not drink directly from a shared container
- located separate from toilet or washing facilities.

Tap water not suitable for drinking should be signed and/or locked off, to prevent accidental or child use.

Image: Hilary Walker

Sufficient lighting must be provided, whether it is from a natural or artificial source, to allow safe movement in and around the dairy and to allow workers to perform their jobs without having to adopt awkward postures or strain their eyes. Particular focus should be on lighting for milking, night pickups of milk, working with cattle and vet work including assisted calving.

Tip

Facilities for workers on small farms

An area within the workplace for making tea and coffee and preparing and storing food may be all that is needed on farms where there are only one or two workers. The area should be protected from the weather, free of tools and work materials and separated from toilet facilities and any hazards (including noise and heat). It should be supplied with seating, a sink with hot and cold water, washing utensils and detergent, an appliance for boiling water, clean storage, including a refrigerator for storing perishable food and vermin-proof rubbish bins (which should be emptied at least daily).

By law

Who has legal responsibility for managing accommodation for workers?

A person conducting a business or undertaking who provides accommodation for workers and owns or manages the accommodation must, so far as is reasonably practicable, maintain the premises so that the worker occupying it is not exposed to health and safety risks.

Tip

Accommodation provided should be secure, with safe access, electrically safe, with smoke alarms and relevant extinguishers, drinking water, facilities for washing, cooking and laundry, heating and cooling and rubbish collection.

An evacuation plan for bush fire risk areas is recommended. Refer to cfa.vic.gov.au/plan-prepare

Psychosocial hazards

The term 'psychosocial' refers to the inter-relationships between a person's thoughts and behaviours and their social environment. In the occupational health and safety, psychosocial hazards refer to hazards arising within the workplace and the work environment. They most commonly relate to stress, bullying and harassment, diversity, inclusion and respect, occupational violence and fatigue.

Generally, work is good for you. It enhances your mental health and personal wellbeing by providing structure, purpose, a sense of identity and self-worth. Work also enables people to develop and display skills and develop social relationships.

However, in some circumstances work can have an adverse impact on individuals and risks to psychological health should be viewed in the same way as other health and safety risks. This involves you consulting with workers and others to identify the hazards, risks and controls, and then implementing and reviewing the controls within your workplace.

At work the risk of psychological injury can be influenced by environmental, organisational and individual psychosocial factors.

- **Environmental factors**

Exposure to some physical hazards in the work environment can influence a person's comfort and performance. For example, exposure to poor air quality (dusts, fumes), high levels of noise, poor lighting, extreme temperatures or unsafe machinery may contribute to a stress response.

- **Organisational factors**

Risk to psychological health can be influenced by organisational factors such as the design of work and jobs, poor communication and interpersonal relationships, fatigue, bullying and occupational violence.

Designing a job that is do-able and rewarding is the key to minimising unhealthy stress for workers. Take into consideration the demands involved for the job; the level of control of aspects of a job such as pace of work or how and when a job is done; the amount of support, supervision and resources available; and the relationships with others who work on the farm. A perception of bias, inconsistency, unfairness or disrespect may also be contributors to stress.

Having clarity around all aspects of a person's role is important so that they know the scope, responsibilities, objectives and expectations. If job roles are to change then communication and consultation is important.

Recognition through feedback on performance and opportunities for reward and skill development are important positive factors.

- **Individual factors**

People respond to stress at work in different ways. Individual differences may mean that some workers are more susceptible to harm from a hazard, for example a worker with a disability or illness, or new and young workers, workers from diverse cultural backgrounds. Aspects of social environment outside work include factors such as family background, socioeconomic status and level of education. It is important to be aware of an individual's non-work psychosocial factors because they may need to be considered when planning work.

Best practice

Consult with all workers on expectations of workplace behaviours.

1. Eliminate or control the environmental factors that may cause stress.
2. Identify and address the farm organisational factors that may cause stress to workers and others.
3. Make job roles clear including: objectives and expectations, responsibilities, skills, supervision, relationships, resources, recognition, feedback and reward.
4. Develop workplans that take into account not only job roles but individual differences such as age, experience and disabilities.
5. Establish workplans that will not cause fatigue.
6. Develop and implement policies around adverse worker relationships and behaviour that could contribute to stress, psychological ill-health and physical injury.

Tip

Psychological hazards may be identified by observing work performance and how workers interact with others, by one-on-one discussions and through feedback from workers. They may also be indicated by patterns of absenteeism, sick leave, staff complaints, staff turnover and compensation claims.

Four steps to preventing psychological injury at work

safeworkaustralia.gov.au/system/files/documents/1910/infographic-four-steps-to-preventing-psychological-injury-at-work.pdf

Fatigue

Fatigue is defined as an acute or ongoing state of tiredness that affects people's performance, safety and health and requires rest and sleep for recovery.

Symptoms include:

- difficulty concentrating
- poor judgement
- reduced vigilance
- increase in mistakes and near misses
- slower reaction times
- blurred vision
- nodding, yawning and eye rubbing
- feeling drowsy, tired or sleepy
- frequent napping
- dropping into micro sleeps
- irritability
- impaired short-term memory
- reduced hand-eye coordination.

Fatigued people may be more likely to engage in behaviours that put themselves and others at risk particularly when driving, operating machinery or undertaking critical tasks.

Accidents are more likely to occur at night (especially midnight to dawn) when people would normally be sleeping.

Maintaining sufficient levels of sleep is necessary in the prevention of fatigue and sleep is essential to recovering from fatigue. The optimum amount of sleep required by an adult varies, the average amount 7-8 hours. Workers and others who continually do not get the sleep they need will be susceptible to fatigue.

It is important to establish work rosters and shifts that reduce the potential for fatigue. This may include consideration of timing and length of shifts and breaks, and number of consecutive days off between shifts. It is critical to identify peak periods of work demands over long work days and plan shifts, rosters and breaks to reduce the risk of fatigue.

A range of actions can be taken if workers have not had enough sleep or when signs of fatigue are emerging, for example providing an opportunity for napping, changing tasks (especially shifting to less safety critical tasks), working in pairs and increasing monitoring of fatigue symptoms.

Best practice

Consult with all workers who are or may be affected by factors that contribute to fatigue.

1. Establish work rosters and shifts that reduce the potential for fatigue.
2. Provide information to workers on identifying symptoms of fatigue.
3. Direct workers to report if they are feeling fatigued.
4. Establish actions taken if workers have not had enough sleep or when signs of fatigue are emerging.
5. Regularly review fatigue management in consultation with workers and others.

Tip

Understanding the symptoms of fatigue can be promoted by displaying a poster in the lunchroom

aghealth.sydney.edu.au/wp-content/uploads/2019/05/MR-6-2016-Managing-Fatigue-this-Harvest.pdf

Fatigue on the Farm – Infographic poster

content.api.worksafe.vic.gov.au/sites/default/files/2020-07/ISBN-Fatigue-on-the-farm-2020-07.pdf

Learn more

The People in Dairy website provides information about setting up jobs and teams in ways that will minimise work-related stress.

thepeopleindairy.org.au

Learn more

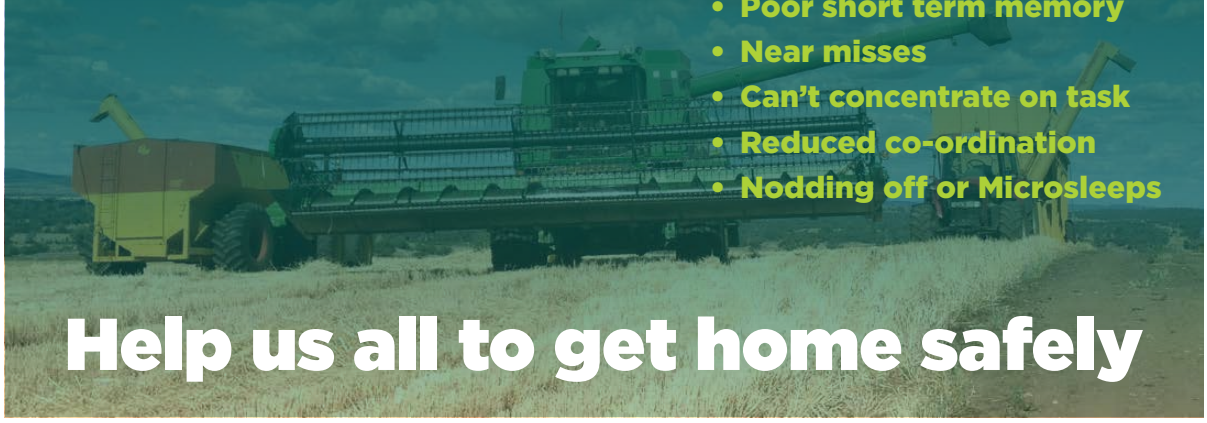
Managing pressures of farming – good practical tips for the farmer and the farm family in managing the stresses of farm life.

aghealth.sydney.edu.au/wp-content/uploads/2021/09/Farm_Family_Handbook.pdf

Farming Fatigue Self-Assessment

See your farm manager before commencing or continuing to work if you answer "YES" to any of these

1. I had less than 6 hours sleep in the past 24 hours?
2. I had less than 12 hours sleep in the past 48 hours?
3. I will have been awake for 16 hours or more when I finish this shift?
4. I have 3+ of the following signs of fatigue?
   - Yawning
   - Irritable
   - Rubbing or closing eyes
   - Struggling to stay awake
   - No energy or motivation
   - Poor short term memory
   - Near misses
   - Can't concentrate on task
   - Reduced co-ordination
   - Nodding off or Microsleeps



Help us all to get home safely

www.aghealth.org.au

AUSTRALIAN CENTRE FOR AGRICULTURAL HEALTH AND SAFETY

Bullying and harassment in the workplace

A worker is 'bullied at work' if, while at work, an individual or group repeatedly behaves unreasonably towards the worker and that behaviour creates a risk to the health and safety of the worker. The sort of behaviours which could amount to bullying are:

- aggressive and intimidating conduct
- belittling or humiliating comments
- victimisation
- spreading malicious rumours
- teasing, practical jokes or initiation
- displaying offensive material
- exclusion from work-related events
- unreasonable work expectations.

Under federal and state legislation, unlawful harassment occurs when someone is made to feel intimidated, insulted or humiliated because of their race, colour, national or ethnic origin, sex, disability, sexual preference or some other characteristic specified under anti-discrimination or human rights legislation. It can also happen if someone is working in a 'hostile' – or intimidating – environment. Harassment can include behaviour such as:

- telling insulting jokes about particular racial groups
- sending explicit or sexually suggestive emails
- displaying offensive or pornographic posters or screen savers
- making derogatory comments or taunts about someone's race or religion
- asking intrusive questions about someone's personal life, including their sex life.

Workers should understand what is and what is not bullying behaviours and harrassment, and that your workplace does not tolerate bullying behaviours or harassment. They should feel that any complaint will be dealt with fairly and transparently.

Best practice

Consult with all workers on expectations of workplace behaviours.

1 Ensure that you have bullying and harassment policies in place and that all workers are aware of them and acknowledge their understanding of behaviour expectations in the workplace.

2 Ensure you have a grievance procedure which can be used to address bullying or harassment complaints and that all workers are aware of it and feel comfortable using it.

3 If you receive an allegation of bullying or harassment from a worker - act immediately.

4 Apply your performance management processes consistently and fairly with all workers and document everything in writing.

Learn more

Farm workplace policies define acceptable workplace behaviours and set out implications for not complying with the policies. For more information and templates:

thepeopleindairy.org.au/farm-safety/policies

Preventing and responding to workplace bullying

safeworkaustralia.gov.au/safety-topic/hazards/bullying

More specific information about what may constitute unlawful harassment is available from the Human Rights and Equal Opportunity Commission

humanrights.gov.au/quick-guide/12040

Injury management

Recording and reporting injuries

See the **Getting Started** topic in this Farm Safety Manual for information and templates for recording hazards, incidents and injuries.

All states and territories require the recording of all work-related injuries, with a follow-up internal investigation and action to ensure the injury does not reoccur.

Workplace deaths, serious injuries and certain serious incidents are required to be reported to the regulator in your state or territory, these are known as notifiable incidents. The table below describes the **types of injuries that must be notified to the regulator** (and those that are not required to be notified).

To be notified	Example	It does not include
Immediate treatment as an in-patient	• Admission into a hospital as an in-patient for any duration, even if the stay is not overnight or longer.	• Out-patient treatment provided by the emergency section of a hospital (i.e. not requiring admission as an in-patient). • Admission for corrective surgery which does not immediately follow the injury (e.g. to fix a fractured nose).
Immediate treatment for the amputation of any part of the body	• Amputation of a limb such as arm or leg, body part such as hand, foot or the tip of a finger, toe, nose or ear.	
Immediate treatment for a serious head injury	• Fractured skull, loss of consciousness, blood clot or bleeding in the brain, damage to the skull to the extent that it is likely to affect organ/face function. • Head injuries resulting in temporary or permanent amnesia.	• A bump to the head resulting in a minor contusion or headache.
Immediate treatment for a serious eye injury	• Injury that results in or is likely to result in the loss of the eye or total or partial loss of vision. • Injury that involves an object penetrating the eye (for example metal fragment, wood chip). • Exposure of the eye to a substance which poses a risk of serious eye damage.	• Eye exposure to a substance that merely causes irritation.
Immediate treatment for a serious burn	• A burn requiring intensive care or critical care which could require compression garment or a skin graft.	• A burn that merely requires washing the wound and applying a dressing.
Immediate treatment for the separation of skin from an underlying tissue (such as de-gloving or scalping)	• Separation of skin from an underlying tissue such that tendon, bone or muscles are exposed (de-gloving or scalping).	• Minor lacerations.
Immediate treatment for a spinal injury	• Injury to the cervical, thoracic, lumbar or sacral vertebrae including the discs and spinal cord.	• Acute back strain.
Immediate treatment for the loss of a bodily function	• Loss of consciousness, loss of movement of a limb or loss of the sense of smell, taste, sight or hearing, or loss of function of an internal organ.	• Mere fainting • A sprain or strain.
Immediate treatment for serious lacerations	• Deep or extensive cuts that cause muscle, tendon, nerve or blood vessel damage or permanent impairment. • Deep puncture wounds. • Tears of wounds to the flesh or tissues—this may include stitching to prevent loss of blood and/or other treatment to prevent loss of bodily function and/or infection.	
Medical treatment within 48 hours of exposure to a substance	• Medical treatment' is treatment provided by a doctor. • Exposure to a substance includes exposure to chemicals, airborne contaminants and exposure to human and/or animal blood and body substances.	

Notifiable Incidents

Notification is also required for serious infections and contract of certain zoonotic diseases, e.g. Q fever and Leptospirosis.

Some dangerous work-related near misses will also need to be reported even if no one is injured. These include for example: an uncontrolled escape, spillage or leakage of a substance, an uncontrolled implosion, explosion or fire, the collapse, overturning, failure or malfunction of, or damage to, any registered plant such as a crane, the collapse or partial collapse of a structure.

Learn more

Notifiable incidents – if in doubt about notification, contact the regulator in your state

safeworkaustralia.gov.au/doc/incident-notification-fact-sheet

Jurisdiction	Regulator	Phone to notify incidents	Website
New South Wales	• SafeWork NSW	• 13 10 50	safework.nsw.gov.au
Victoria	• WorkSafe Victoria	• 13 23 60	worksafe.vic.gov.au
Queensland	• WorkSafe Queensland	• 1300 362 128	worksafe.qld.gov.au
South Australia	• SafeWork SA	• 1800 777 209	safework.sa.gov.au
Western Australia	• WorkSafe WA	• 1800 678 198	commerce.wa.gov.au/WorkSafe
ACT	• WorkSafe ACT	• 02 6207 3000	accesscanberra.act.gov.au/app/home/workhealthandsafety
Tasmania	• WorkSafe Tasmania	• 1300 366 322	worksafe.tas.gov.au

Workers' compensation and return to work

Workers' compensation is managed by a Workcover authority in each state and territory and the rules vary significantly from state to state. Workers' compensation laws apply to all employees whether permanent or casual and failure to register and pay the workers compensation levy is an offence.

In some states, share farmers are deemed to be employees for workers' compensation laws and most state workers' compensation laws also deem certain independent contractors to be employees for the purpose of workers compensation responsibilities. The rules differ markedly and some of them are complex.

Contact the WorkCover authority in your state for information on workers' compensation and return to work plans.

Return to work posters are available from your workers' compensation insurer.

Health monitoring

Health monitoring is required for some hazard substances and asbestos exposure. Aside from asbestos, one of the common hazardous substances farmers are exposed to are organo-phosphates (OPs) and health monitoring must be undertaken for some OPs. Consult each Safety Data Sheet (SDS) to determine what health monitoring is needed.

Consultation and communication

Throughout this Farm Safety Manual, there are reminders that it is a legal requirement to consult with workers on health and safety matters. For most farms, regular consultation could occur at your regular worker meetings with health and safety on the agenda.

Discuss relevant safety topics at any meeting to keep safety top of mind. Source: Dairy Australia

Learn more

Consultation on workplace health and safety – Code of Practice is available from Safework Australia

safeworkaustralia.gov.au/doc/model-code-practice-work-health-and-safety-consultation-cooperation-and-coordination

Emergency response plans

Prevention of incidents and injuries is the clear objective of each farm safety program, but emergency plans and facilities need to be in place to adequately respond if things do go wrong.

Time is often critical in an emergency. Having well-thought-out and practised plans, supported by well-trained people and access to the correct equipment, will provide confidence to respond. This can prevent or reduce the severity of injuries to people and livestock, limit damage to infrastructure and in some circumstances, reduce the impact on neighbours and the community.

Your farm emergency plan must cover:

1 Emergency procedures
   - effective responses to possible emergencies
   - evacuation procedures
   - notification of emergency services at the earliest opportunity
   - medical treatment and assistance; and
   - coordination and communication of the emergency response for everyone at the workplace.
2 Testing of the emergency procedures (including how often they should be tested).
3 Information, training and instruction to relevant workers for implementing the emergency procedures.

The first step in making an emergency response plan for your farm is to **identify the potential emergencies**. The types of emergencies that may occur on a dairy farm could include fire, flood, cyclone or severe storms, machinery entrapment, electrical shock, snake or spider bite, chemical exposure/spillage, injuries, illness and accidents, working alone

The requirements for **resources and procedures** will differ on each farm and will depend, for example, on the size of the farm, the activities involved, the distance from emergency medical assistance, the first aid skill level of people on the farm, the presence of children, and the level of emergency communication (e.g. mobile phone coverage).

Emergency facilities must be appropriate for the types of emergencies that might occur (e.g. deluge showers, eye washes, firefighting equipment, first aid kits). The emergency facilities must be located where they are needed, installed correctly, regularly maintained, and access to them kept clear. The correct equipment must be available to contain and handle any chemical spills that might happen, see the topic: Farm Chemicals for more information.

Evacuation routes in buildings should be clearly marked and kept clear. Nominate evacuation assembly areas in a safe place (and have alternative assembly areas in case the first is affected by the emergency).

Planning for evacuation of people and movement of livestock may involve monitoring weather, fire or flood conditions and relocating stock early – the movement of livestock during an emergency event could put lives at risk.

Nominate someone to be responsible for emergency coordination and ensure they are trained in emergency management and control. This should be someone who is on the farm most of the time.

Instruct everyone working on the farm in the emergency response procedures. Include it in your **induction programs** and make sure that **contractors and visitors** to the farm also know what to do in the event of an emergency. Everyone should know the location of fire alarms, fire extinguishers and first aid kits; how and where to contact emergency services; and where to safely assemble in the event of an emergency.

Training is important. No one should try to fight fires, deal with spills of hazardous substances, undertake rescues or do anything to control an emergency situation unless they are confident to do so, have been trained in the correct procedures and it is safe to do so.

Tip

Consult and engage the local emergency services about your plans as you set them up.

Tip

Display emergency contact numbers in locations such as the dairy, workshops, at first aid stations and in houses (include rentals) and accommodation supplied to employees. A template for an emergency notice is included in this topic of your Farm Safety Manual.

Tip

On your farm map show the location of the Emergency Assembly Area, location of fire extinguishers, first aid kits and chemical SDS.

List the name and mobile numbers of first aiders and supervisors. Include direction to call 000, and the poisons information number 13 11 26

Calling 000

Calling 000
is the quickest way to get the right emergency service to help you.
You can contact Police, Fire or Ambulance in life threatening or emergency situations via that number.

Teach children on the farm about 000.

'Stay focused, stay relevant, stay on the line'

For more information:
triplezero.gov.au/triple-zero/How-to-Call-000

Tip

Poisons information line 13 11 26 - if you think someone has been poisoned, taken the wrong medication or the wrong dose or been bitten or stung by a marine animal, spider, snake or insect.

BUT In an emergency, call 000.
Do not call the Poisons information line in emergency situations where the person has collapsed, stopped breathing, is having a fit or had an anaphylactic shock.

If someone has to go to hospital or an ambulance attends, try to have the relevant chemical SDS on hand (if the poison is known).

Learn more

For guidance on formulating plans, first aid training and first aid kits, visit:
safeworkaustralia.gov.au/doc/model-code-practice-first-aid-workplace

The Dairy Australia website has a series of extreme weather information pages (including preparing for bushfires). Resources include a **dairy farm emergency preparedness checklist** to help farmers prepare for and reduce the potential for injury and property damage.

dairyaustralia.com.au/issues-and-emergencies/extreme-weather

General principles and examples of emergency response planning:

Engineering

- Provide fire extinguishers for facilities, including the dairy, workshops, feed sheds, chemical and fuel storage and houses.
- Provide fire extinguishers for machinery and vehicles.
- Fit smoke alarms in accommodation and offices.
- Have spill kits for chemical storage.
- Install deluge shower and eye wash station near chemical storage.
- Locate lifesaving rings near ponds or steep sided slippery channels.

Administrative controls

- Provide training and induction in emergency response.
- Provide dedicated trained first aiders.
- Establish a site evacuation plan and display strategically.
- Establish and sign post an emergency assembly area.
- Ensure someone with the skill set will be responsible to coordinate a response.
- Provide adequate, relevant, up-to-date first aid kits.
- Develop an effective communication plan for situations when working alone.

Personal Protective Equipment (PPE)

- Include disposable gloves and resuscitation masks in the first aid kit.
- Use appropriate clothing and PPE for responding to fires, chemical incidents and floods (may include personal flotation devices).

Tip

Working alone – Contact is essential

Time is never more critical if an injury occurs to someone working remotely or alone. There have been many farm incidents where an injured person has not been found for hours (sometimes days) because no one knew where they were and they did not have a means of communication or a system of checking in.

Having well-maintained, effective equipment such as mobile phones, personal alarm devices and two-way radios is essential.

First aid

First aid kits

The main first aid kit for the farm should be kept in the dairy, accessible to all workers at all times, regularly checked and well-maintained.. There should be a sign outside the dairy to indicate to everyone that it is there, and a clear label on the kit itself. It should be hooked on the wall in a way that makes it easy to take to a casualty.

By law

WHS regulations place obligations on a person conducting a business or undertaking in relation to first aid, including requirements to:

- provide first aid equipment and ensure each worker at the workplace has access to the equipment
- ensure access to facilities for the administration of first aid
- ensure that an adequate number of workers are trained to administer first aid at the workplace or that workers have access to an adequate number of other people who have been trained to administer first aid.

Small first response kits could be carried in tractors, quads or utes when working remotely. Other kits may be located in accommodation and houses, again with their locations clearly signed.

Someone needs to be responsible for checking and updating first aid kits. Commercial suppliers will provide this service. Always record the date the kit was updated or checked

First aid training

This is commercially available and can be conducted in a manner relevant to farming if you have sufficient numbers.

Always check the skills of new workers to see if they have up to date first aid training or other emergency response skills e.g. firefighting, SES, community ambulance first responder.

Tip

Consult the SDSs of chemicals used on the farm to assess the requirements for your first aid kits.

Tip

There are a range of commercial providers of first aid kits and first aid training. Shop around for those that meet the needs of your farm and situation.

Fire extinguishers

Chose the type and size of fire extinguishers you need for buildings and plant and ensure they are serviced/ recharged at appropriate intervals.

Tip

Commercial services and some fire services will conduct both the servicing and assessment of your farms requirements. Always get quotes.

For comparison of extinguishers, advantages and disadvantages and estimated costs the following is a link to a commercial site:

fireextinguishersales.com.au/resources.php

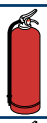
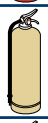
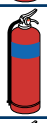
Image: Hilary Walker

Portable Fire Extinguisher Guide

T +61 3 9890 1544
F +61 3 9890 1577
E shop@fpaa.com.au
E technical@fpaa.com.au
W www.fpaa.com.au

FPA AUSTRALIA
Fire Protection Association Australia

Type of Fire, Class and Suitability

Pre 1997	Current	Extinguishing Agent		A Wood Paper Plastic	B Flammable & Combustible Liquids	C Flammable Gases	E Electrically Energised Equipment	F Cooking Oils and Fats	Comments	D Metal Fires
		Water		✓	✗	✗	✗	✗	Dangerous if used on flammable liquid, energised electrical equipment and cooking oil/fat fires	Use only special purpose extinguishers and seek expert advice.
		Wet Chemical		✓	✗	✗	✗	✓	Dangerous if used on energised electrical equipment	
		Foam*		✓	✓	✗	✗	LIMITED	Dangerous if used on energised electrical equipment	
		Powder	(ABE)	✓	✓	✓	✓	✗	Look carefully at the extinguisher to determine if it is a BE or ABE unit as the capability is different	
			(BE)	✗	✓	✓	✓	✓		
		Carbon Dioxide		LIMITED	LIMITED	✗	✓	✗	Not suitable for outdoor use or smouldering deep seated A Class Fires	
		Vaporising Liquid		✓	LIMITED	LIMITED	✓	✗	Check the characteristics of the specific extinguishing agent. 5 Yearly servicing must be done by ODS &SGG licenced persons.	
		Fire Blanket		LIMITED*	LIMITED	✗	✗	✓	* Fire Blankets may be used as a thermal barrier against radiated heat and to control a fire in clothes being worn by a person.	

LEGEND ✓ = the class or classes in which agent is most effective
✗ = not recommend for these class of fires
For more information go to: www.fpaa.com.au

LIMITED = indicates that the Extinguishant is not the agent of choice for the class of fire, but it may have a limited extinguishing capability
* Solvents such as alcohol or acetone mix with water and therefore require special foam

For more information go to: fpaa.com.au

Farm records

Farm records

Visitors, children and traffic

Everyone wants a safe place to live and work. The challenge with dairy farms is they are workplaces with potentially hazardous animals, equipment, environments and substances and they are also places where families live and invite visitors. Children living on and visiting farms can be exposed to a variety of workplace hazards not present at most homes.

All farm businesses have an obligation under law to provide a safe and healthy workplace for their employees, contractors, family, visitors and members of the public. Farm businesses who don't act to fulfil health and safety responsibilities face significant fines and penaltie and potentially the heartache of knowing someone has been injured or killed.

From The Advocate **19 July, 2017**

Farm Safety Week 2017: Safety is everyone's business at Ashgrove

Sarah Lansdown

On a dairy farm, hazards are everywhere you look: from electric fences to unseen holes in the paddock.

Ashgrove Dairy was recognised as an industry leader in farm safety when they took out the Dairy Safety Award at the annual Tasmanian Dairy Awards.

Operations manager at Ashgrove Farms Troy Ainslie said the company was happy to win the award, which was jointly presented by the Tasmanian Institute of Agriculture (TIA) and DairyTas.

"We were stoked. We were real happy about it to know that it was recognised, what we're doing for our employees," Mr Ainslie said.

The award recognises farms that show initiative and innovation to improve safety at their business.

At Ashgrove, managing risks starts before you even step foot on the farm.

Safe and sound: Ashgrove Farms operations manager, Troy Ainslie, and his daughter Indianna, 8, and dog Bazz. Picture: Neil Richardson

"We do have some big signs out front of the farms listing majority of hazards on the farm and not allowed in until you've contacted number on the board," Mr Ainslie said.

Employee training was also a large part of mitigating accidents on the farm.

Mr Ainslie said he strove to create a friendly, happy workplace and that he delegated tasks according to different employees' skills.

Mr Ainslie manages 13 staff at Ashgrove farms with experience levels ranging from one week to 10 years.

"Every employee contributes towards it and it's every employee's business," Mr Ainslie.

Step-by-step – Setting up safety for visitors, children and traffic on your farm

Getting started

Read through this information pack.	☐
Complete the visitors, children and traffic **Safety Self-Assessment** (traffic lights) page.	☐
Make a list of actions and **set a date** to have each action completed in the **Action Plan.**	☐
Read through the information quickly again.	☐
Pick a topic to discuss with staff or family at your next **workplace meeting** (you should have at least one safety topic each meeting).	☐

Resources in this section

- **Information** about safety for visitors, children and traffic on dairy farms and legal obligations
- **Safety Self-Assessment**
- **Templates**
  - induction for visitors
  - policy around actioning children on-farm.

Information and templates provided in this folder are also available at **thepeopleindairy.org.au/farm-safety** You can edit the templates to suit your farm.

Self-assessment – Add your actions to your Action Plan at the back of this folder

For visitors, children and traffic	Poor practice Address these areas immediately!	Improving safety practice There is still work to be done	Great safety practice Monitor and review to continually improve
A traffic management plan that separates vehicles and pedestrians, especially near the dairy	☐ Not in place	☐ Some elements in place	☐ Fully implemented
Truck entrance to the farm	☐ Same as to the house	☐ Near the house, some shared track	☐ Separate from the house
Operational reverse warning beepers and rotational beacons on mobile plant	☐ None	☐ Some	☐ All mobile plant
Parking for workers and visitors away from hazardous areas	☐ None designated	☐ Designated but not signed	☐ Designated and clearly signed
Reporting on arrival by visitors and their induction on safety rules	☐ Not done	☐ Sometimes	☐ Always
Workers and others wear high visibility clothing	☐ Rarely	☐ Sometimes	☐ At all times
Rules: 'No go' zones, speed limits	☐ Not established	☐ Usually followed, but not always	☐ Always followed
Rules: No children under 16 years to operate Quads/no riding on vehicle trays or trailers/no passengers on quads or mobile plant	☐ Not established or followed	☐ Usually followed, but not always	☐ Always followed
Rules: Seat belts for all vehicle operators and passengers/child restraints for under 7-year-olds	☐ Not clear or followed	☐ Usually followed, but not always	☐ Always followed
Toddler-proof fencing and safe play area near the house	☐ Not in place	☐ In place but needs improving	☐ Well set up
Hazardous areas such as chemical stores, water, workshops, ladders	☐ Could be accessed by children	☐ Most secured but not all	☐ All secured, no access possible
Policy: workers and visitors not to bring children onto the farm without permission	☐ Not established or followed	☐ Usually followed, but not always	☐ Always followed
Supervision of children when on the farm	☐ Rarely	☐ Sometimes	☐ At all times
Reporting accidents and incidents	☐ No process set up	☐ Process set up, not used by all	☐ Process is used by all workers
Follow-up of reported incidents	☐ None	☐ Limited review and action	☐ All issues acted on

Visitors

Visitors are a welcome part of business and family life on farms, but it is important that all visitors know and co-operate with the farm's health and safety rules.

Visitors should report to the manager or nominated person when they arrive and receive an induction briefing on the relevant aspects of the farm – such as layout, no-go zones and activities, specific hazards, emergency procedures, hazard and incident reporting. It may be important to discuss any clothing or protective equipment needed. This is also a time to make the farm policy on children clear.

Use the template to construct your own process for induction of visitors.

Best practice

1. Provide clear directional signage for parking and reporting on arrival.
2. Provide an induction for visitors that includes the safety rules of the farm and 'no-go' areas.
3. Establish a policy around children in the workplace, including those of visitors.
4. Ensure visitors' children are supervised if entering a work area.
5. Ensure that access to hazardous areas is restricted and appropriately signed.

Clear directions for visitors enhance farm safety (and biosecurity)

Children on farms (including visitors' children)

Farms are great places to grow up and develop independence and skills, especially if it happens in a strong culture of caring about safety.

Every area of the farm poses risks for children. This is true for those who live on the farm, including tenants' children, and those who visit the farm (around 30% of children who die on farms are visitors). Chemicals, water, heights, vehicles, workshops and livestock are all hazards that can cause serious injuries for kids.

The most common causes of fatalities and injuries to children on farms are:

- drowning of toddlers
- falling off or being crushed by quad bikes
- runovers by tractors and farm vehicles
- falling off the back off moving farm utes
- farm vehicle crashes
- entanglement in farm machinery
- being crushed by livestock.

Many of the topics in your Farm Safety Manual have covered these areas in detail, particularly in Water and Effluent, Quads and Motorbikes, Farm Vehicles, and the section on Traffic in this topic. Think about children as you use these resources.

It is wise to have a policy around workers bringing children to work. The safest option is for no children of workers to be present, however if children are allowed, it should only happen with permission and there should be clear rules about where they are permitted to be, what they can and cannot do, and the supervision required.

The positive message of getting it right ('this is what we expect' via a code of conduct or statement of policies/protocols) must be underpinned by making the consequences of not doing it very clear (i.e. a zero-tolerance disciplinary procedure). Use the template in this topic to draft a policy for your farm, then discuss and develop it with your staff. If they contribute to the final version of the policy it is more likely to be workable and followed.

The following is a summary of best practice suggestions to reducing the risk of fatalities and injuries to children on farms, as supported by Farmsafe Australia and Kidsafe Australia.

Best practice

1 Create a Safe Play Area for toddlers.
2 Supervise children on farms.
3 Remove keys from vehicles, quads and tractors.
4 Do not allow children under 16 years of age to operate quads.
5 Do not carry children as passengers on tractors, farm machinery or quads.
6 Do not allow children to ride in the back of utes, side-by-sides or trailers.
7 Ensure that children wear seat belts inside farm vehicles.
8 Ensure that everyone wears helmets when riding horses, bicycles,motorbikes and for quads and side-by-sides for children 16 years of age and older.

The list of reminders and recommendations below is not exhaustive, but provides a guide. A walk-through by parents, grandparents, older children and others will help to identify hazards that need to be addressed on each farm.

Learn more

FarmSafe

farmsafe.org.au/content/product/Child%20Safety%20%26%20Teaching%20Kits/

Guidance Booklet

aghealth.sydney.edu.au/wp-content/uploads/2019/05/Child_Safety_on_Farms.pdf

Better Health

betterhealth.vic.gov.au/health/healthyliving/farm-safety-children#farm-risk-assessment-children

Around water, including effluent ponds, wells, irrigation channels and dams

1 Provide young children with safe play areas that are escape-proof.
2 Fence around houses to restrict (and define boundaries) for children.
3 Fence off swimming pools.
4 Where practical, fence off dams, effluent ponds and solids traps near houses.
5 Fit secure covers to wells, drains and tanks.
6 Fill in holes, ditches and post holes that fill with water (and check if there are containers that may fill with water after heavy rain).
7 Inform workers and visitors (include house renters and farm stay tenants) of the water hazards present on the farm.
8 Fit reminder signage to close gates around safe play areas, around house yards and around fenced off water hazards.
9 Fit signage warning of relevant water hazards.
10 Ensure adult supervision of children when in, on or around water. Never take your eyes off children around water.
11 Have children undertake a water awareness program.
12 Have workers and others undertake CPR training.
13 Establish emergency response procedures.

Quads

14 Do not allow children under 16 to operate quads.
15 Do not carry passengers, including children, on quads.

Motorbikes

16 Match the motorbike size and power to child's size, strength and judgemen.t
17 Consider power governors/speed restrictor.s
18 Establish rules around speed, 'no go' zones and no passengers.
19 Provide instruction in controls and correct riding techniques, including varying terrain and surfaces.
20 Insist that the child wears a correct fitting motorcycle helmet (AS 1698).

Tips

Is it the right sized motorbike for the child?

- Can the child lift the bike from the ground unassisted? and
- Can the child reach the ground with their feet when astride the bike?

Livestock

21 Provide clear direction to visitors regarding 'no go' zones on the farm.
22 Always supervise young children around animals (including calves and dogs).
23 Ensure there are physical barriers between them and any anima.l
24 Locate bulls in secure paddocks away from the house.
25 If they are riding horses on the farm, match the horse to the child's experience and confidence.
26 Ensure riders wear a correct fitting helmet (that meets AS 3838 Equestrian helmet) and riding boots.
27 Teach children to wash their hands after touching animals.

Tractors, farm vehicles and farm machinery

28 Fit warning devices and reversing cameras.
29 Dress children with highly visible clothing.
30 Establish rules for operators and children including:

- Do not leave tractors, vehicles and machinery running unattended
- Remove keys and lock cabins
- Reverse park into sheds to ensure clear vision when exiting
- No children as passengers on tractors or farm machinery
- Do not allow play on tractors and machinery
- Lower all raised implements (including loader and forks) after use
- Explain hazards associated with tractors and machinery to children
- No riding on trays of utes or trailers
- Use child restraints and seat belts at all times (and set the example.)

Farm workshop and machinery maintenance shed

31 Have lockable doors to isolate whole area.
32 Return all tools to storage after use.
33 Ensure Safety switches cover all power outlets.
34 Ensure all portable electric tools are turned off and disconnected.
35 Maintain guards on equipment such as air compressors and small engine belt drives.
36 Ensure chemicals are stored in locked suitable storage facilities.

The dairy and feed areas

37 Ensure that hot water taps are clearly marked (red) and out of reach of children and/or locked off.

38 Return chemicals to secure and locked storage.

39 Isolate chemicals in use, contain spills within the isolated area, and ensure all are out of reach of child hands and fingers.

40 Store refrigerated chemicals in a separate lockable fridge.

41 Never decant chemicals into drink or water bottles.

42 Teach children not to touch, smell or drink chemicals.

43 Ensure that all plant is guarded (with attention to automated equipment) and isolate with physical barriers if not able to be guarded.

44 Fit child-proof guards or cut off ladder access on silos and tanks.

45 Guard feed plant including augers, crushers and rollers.

46 Isolate feed processing sheds.

47 Fence off and secure hay and silage stacks (routinely inspect stability of stacks).

48 Instruct children not to play on hay stacks or on bulk feed bunkers.

49 Store firearms in a compliant gun safe.

50 Consider secure, visible child area within the office area of the dairy.

51 Supervise all children visiting the dairy.

Tip

Be a role model. Kids are quick to pick up the difference between what we say and what we do. Building a safety culture on the farm is about being clear and consistent all the time.

Learn more

Child care options for farm families

aghealth.sydney.edu.au/wp-content/uploads/2019/05/childcare_factsheet_farmingfamilies.pdf

Children in the workplace

commerce.wa.gov.au/sites/default/files/atoms/files/children_at_the_workplace.pdf

worksafe.vic.gov.au/children-on-farms

Learn more

Children helping out

Children are always keen to help on the farm but chores or jobs should be matched to their physical, mental and emotional development.

Child Safety on Farms is an excellent guide to understanding child development and capability at different ages, and gives practical tips about educating children about safety.

aghealth.sydney.edu.au/wp-content/uploads/2019/05/child_safety_on_farms_2009.pdf

Fencing and safe play areas

Where fences are used to restrict children's access to hazards (such as dams, effluent ponds or vehicle tracks) or demonstrate boundaries (such as around the house) choosing the fencing materials is important. Well-strained chicken wire is a good option because it is more difficult to climb than plain wire, ring lock or hinge joint fences.

Farms with young children living or visiting should also have a safe play area. This is a securely fenced area which can be used by toddlers in safety, in general use or in the event of an emergency. It might be a smaller area within the house yard, which can be dismantled once the children have grown.

The safe play area should be securely fenced, without any water bodies or drowning hazards inside it, and with toys and equipment to make it a fun place for young children to be.

Learn more

For ideas about play safe areas from farming families see:

aghealth.sydney.edu.au/wp-content/uploads/2019/05/aghealth_spa_booklet.pdf

Tip

The fence of the safe play area should be made of materials that are sturdy and not easily climbable by children. There should be no gap greater than 100mm between the fence and the ground and it should be high enough to prevent children climbing over it (without anything nearby that can be climbed on like pots, BBQs, chairs or vegetation).

The gate to the safe play area should be self-closing and self-latching and never be propped open under any circumstances. Fences and gates should be regularly maintained to ensure they are always in good working order.

Safe play areas do not replace active adult supervision and should be easily observable by parents and carers.

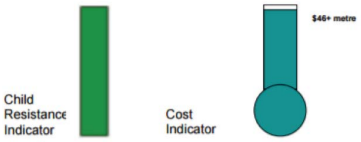
Water and children

In a research project funded by the Rural Industries Research and Development Corporation (RIRDC), a range of fence designs were collected from farmers, fencing manufacturers and contractors and assessed by an expert panel to provide guidance on the pros and cons of each design. Four examples from this study are shown here:

Example 1

- The most cost effective pool compliant fencing of this type consists of vertical members that are either 8mm wire, or round/rectangle hollow section steel.
- The distance between vertical members is usually 80–90mm.

The distance between the farthest apart horizontal supports is a minimum of 900mm, which makes it difficult for a child to scale this fence.



		Comments against key criteria
1	**Effectiveness as a child resistant barrier**	• These fence designs are pool fence compliant, and are therefore considered to be highly child resistant.
2	**Potential to injure a child attempting to scale the fence**	• Risk of injury is low.
3	**Robustness, corrosion and wear resistance**	• This product is hot dip galvanised, and is therefore long lasting.
4	**Material cost and availability**	• Cost is over $60 per metre for materials only. • There are standard pool fencing designs, which are widely available.
5	**Ease of installation, maintenance requirements**	• Installation is straight forward, with low maintenance requirements.
6	**Aesthetics and potential to customise.**	• This product is typically powder coated, with a range of colours and decorative upper styles available.

- **These designs offer a highly child resistant fence.**
- **If this type of fencing is considered too expensive for large area, a smaller play area could be considered.**

Example 2

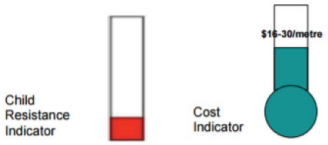
- Corrugated iron, or colourbond steel panels (shown) or other solid materials (e.g. used conveyor belting) provide and attractive child resistant fence. Any necessary supporting horizontal structure should be on the outside of the fence.
- In high winds gates made of solid material may swing open under sustained pressure.

		Comments against key criteria
1	**Effectiveness as a child resistant barrier**	• This fence makes a very good barrier, and meets the pool standards at a minimum height of 1.2m. • In high wind gates made of solid material may swing open if latches are not suitably robust.
2	**Potential to injure a child attempting to scale the fence**	• The risk of injury is low if top and bottom rails are used to protect the sharp edges as shown.
3	**Robustness, corrosion and wear resistance**	• This is a robust and long lasting fence.
4	**Material cost and availability**	• Colourbond comes at a higher cost than corrugated iron. Both materials are readily available.
5	**Ease of installation, maintenance requirements**	• Installation is straight forward.
6	**Aesthetics and potential to customise**	• Cannot see through the fence – whether this is seen as an advantage of disadvantage will depend on what is on the other side. • The fence may be used to block noise, wind and dust. • Colourbond comes in a range of colours and styles.

- **This fence is of moderate cost, and provides a high level of child resistance. Part of the fence could be constructed using these materials, particularly to screen noise, dust, wind and to provide privacy.**

Example 3

- The 'chain wire' fence is popular, and used in various configurations. It often accompanies a round hollow section steel frame, or a post and rail arrangement, as shown.
- This material has been at heights of 1.2m and 1.8m.



		Comments against key criteria
1	**Effectiveness as a child resistant barrier**	• This fence does not meet the pool standard, and is easily climbable, due to the large aperture sizes, and the sturdy construction. • At 1.8m, the fence provides a higher degree of child resistance.
2	**Potential to injure a child attempting to scale the fence**	• At 1.8m, there is an increased risk of child injury if they fall in an attempt to climb over the fence.
3	**Robustness, corrosion and wear resistance**	• Chain wire is sturdier than chicken wire, and is durable and with a long life.
4	**Material cost and availability**	• Chain wire is low cost and is readily available. However, the most common supporting structure is round hollow section galvanised pipe, which is approximately $20 per metre for materials only. • This cost is naturally higher for a 1.8m fence.
5	**Ease of installation, maintenance requirements**	• Installation is straight forward, with low maintenance requirements.
6	**Aesthetics and potential to customise**	• A wooden post and top rail is often used to improve the appearance of this kind of fence.

- **The 'chain wire' fence is popular, and used in various configurations. It often accompanies a round hollow section steel frame, or a post and rail arrangement, as shown.**
- **This material has been used at heights of 1.2m and 1.8m.**

Example 4

- This fence is manufactured in panels 3m wide by 1.2m high. The wire thickness is 5mm and is erected by tech screwing the panels to RHS posts.
- This can be seen as an example of any mesh fence, where the horizontal wire supports are close enough together to provide a sturdy climbing support.

		Comments against key criteria
1	**Effectiveness as a child resistant barrier**	• This fence is not effective as a child resistant barrier, and is easily climbable.
2	**Potential to injure a child attempting to scale the fence**	• The risk of injury is low.
3	**Robustness, corrosion and wear resistance**	• This product is galvanised and is therefore long lasting.
4	**Material cost and availability**	• The cost is less than similarly designed pool compliant fences. • Currently this product is widely distributed.
5	**Ease of installation, maintenance requirements**	• Installation is straight forward, with low maintenance requirements.
6	**Aesthetics and potential to customise**	• It is possible at additional cost to paint or powder coat this product to improve the appearance.

- **This design is not effective as a child resistant barrier and is easily climbed.**

Traffic

Vehicles of all sizes including tankers, trucks, cars, utes, 4-wheel drives, quads, tractors and other heavy machinery are common around dairy farms and their access and use is often near the dairy, buildings or houses where pedestrians and children are present. With larger trucks and machinery, the ability of the operator to see bystanders is diminished, braking distances are greater and manoeuvrability is reduced.

Being hit or run over by these vehicles can be fatal.

The major factor to consider in controlling these risks is how to physically separate vehicles and people.

For a new dairy, traffic and pedestrians can be separated by planning the location of the milking shed, the calf shed, bulk feed silos and bunkers, access tracks, loading and unloading sites and parking for workers and visitors.

For existing dairies, particularly those close to a house, it is important to identify the hazards where people and traffic interact. Discussions with workers, including contractors, may help to identify these hazards more clearly.

Changing the layout of the farm may not always be possible but there will be many ways of reducing the risk of collisions between vehicles and pedestrians.

Best practice

1. Develop and implement a traffic management plan that separates people from tractors, trucks, vehicles and mobile plant, especially near the home and dairy.
2. Install clear directional signage at the farm entrance, speed limits, wearing of PPE (high visibility clothing) and pedestrian/children warning signs.
3. Fit and maintain reverse mirrors and beepers and proximity sensors to vehicles, and rotating warning lights and reverse beepers to tractors and other mobile plant.
4. Establish and enforce safety operation procedures and rules such as speed limits and separation distances from mobile plant and machinery.
5. Wear high visibility reflective clothing that enables operators to see pedestrians more easily, including children.
6. Have child-proof fencing around houses.

Who has legal responsibility for managing traffic hazards?

- **A person conducting a business or undertaking** has the primary duty under the WHS Act to ensure, so far as is reasonably practicable, that workers and other persons at the workplace are not exposed to health and safety risks arising from the business or undertaking. This duty includes:
  - implementing measures to control the risks of persons being injured due to the movement of vehicles or plant at the workplace
  - ensuring that the workplace and the means of entering and exiting the workplace are without health and safety risks to any person
  - providing any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out.
- **A person with management or control of powered mobile plant** must ensure that the risk of powered mobile plant colliding with pedestrians or other plant is controlled so far as is reasonably practicable. If there is a possibility of collision, the plant must have a device that will warn persons who may be at risk from the movement of the plant, and measures must be taken to eliminate or minimise the risk.

The general principles and examples of risk management for traffic hazards:

Elimination

- Physically separate pedestrians from operating vehicles.

Engineering

- Locate tracks with high traffic and areas for trucks and farm machinery away from the house.
- Design tracks to minimise the need for tankers and trucks to reverse, for example by having pull-alongside access to the vat room, silos and fuel tanks.
- Direct traffic away from hazardous areas such as ditches and overhead powerlines.
- Locate designated parking areas for workers and visitors away from heavy vehicle work areas and traffic zones.
- If needed, provide a bollard protected walkway from the car park to the dairy.
- Protect pedestrians at entrances to buildings and on blind corners with fixed bollards.
- Clearly mark pedestrian walkways, for example with highly visible bollards and/or surface paint.
- Use mirrors and vision panels at doorways to areas where vehicles are present.
- Use temporary gates or barriers to separate vehicles and pedestrians, for example when loading or unloading trucks.
- Ensure traffic areas are well lit.
- Maintain tracks and working areas in good condition.
- Provide strategic speed humps to slow traffic.
- Consider speed limiters on certain vehicles such as quads or side-by-sides.
- Consider quick hitch systems for tractors and machinery that does not require the presence of a second person.
- Have toddler-proof fencing around the house (remember visitors may have young children).

Safe operation and rules

- Establish speed limits for the farm and around houses and buildings.
- Provide clear directional signage for parking and reporting in.
- Provide clear signage indicating speed limits, entrances for trucks, vehicle operating areas and warning of presence of children.
- Establish exclusion zones for 'tractor only' areas such as silage or feed bunkers.
- When unloading a truck ensure the truck driver is in a visible safe zone.
- Have 'pedestrian only' areas around entrances, amenities and houses.
- Establish a safe means of communication between machine operators and others.
- Ensure children are supervised if entering a work area, including visitors' children.
- Wear high visibility and reflective clothing and workwear.

Learn more

General guides for workplace traffic management

safeworkaustralia.gov.au/doc/traffic-management-general-guide

Tips

- Reverse beeper globes can be fitted to the reverse globe socket of cars and 4-wheel drives. Reverse cameras can also be retrofitted to the rear of vehicles and mobile plant.
- Vegetation may need to be removed or cut back so that it doesn't restrict the vision of operators and pedestrians. Check entrances and exits from the farm onto public roads to ascertain if vegetation is a problem.
- Bollards placed out from the corners of a building will provide a clear space for pedestrians and help protect the building from vehicle damage.
- Reversing tractors and other vehicles into sheds will give operators much clearer vision upon exit.

Farm policy on children in the workplace

Farm	
Purpose	This policy is in place to ensure that children are not at risk on our farm.
Who does it apply to?	Managers, staff, contractors, tenants and visitors.
Consequences of not complying with this policy	Failure to follow the processes outlined in this policy may lead to disciplinary action, dismissal or termination of contract. If any circumstance arises that would make it difficult to comply with this policy, immediately contact:
Policy was last reviewed	**Date:**

Every area of the farm poses risks for children. Chemicals, water, heights, vehicles, machinery, workshops and livestock are all hazards that can cause serious injuries for kids.

On this farm, to reduce the risk of injury to children, the following has been established:

- A safe play area is available at

_____

_____

- Where possible, water hazards have been fenced off or covered.
- Access to ladders is prevented.
- Hazardous areas have been secured to prevent access by children and unauthorised people.
- Our policy on quad bike use forbids children as operators or passengers.
- Keys are removed from vehicles and machinery when they are not in use.

We are absolutely committed to reducing the risk of injury of children on this farm and the following rules apply to all.

1. No child is to come onto the work area of the farm without the permission of

   _____

   _____

2. All children must be supervised by an adult at all times.
3. When outside to play young children must stay in the safe play area where they can be observed by an adult.
4. No child is to be carried on tractors, farm machinery, vehicle trays, trailers, or carried as passengers on quads.
5. All children travelling in vehicles must wear seat belts, or if under seven years, must be in a correctly fitted approved child restraint.
6. No child under the age of 16 is authorised to operate a quad bike.
7. No child is to enter the machinery shed, dairy, including yards, feed shed workshop or machine operating area.

Staff member/contractor acknowledgement

I have received a copy of this policy and have read understood and agree to comply with it.

Name:

Signature: Date:

Remarks or comments:

*** File this document in the relevant farm folder and retain for a minimum of two years ****

Dairy safety induction for visitors

Business name:

Visitors are welcome to our farm, but it is a workplace and we ask you to co-operate with our health and safety rules.

Please phone:

When you arrive or report to:

who will show you the farm layout and no-go zones and discuss any clothing or protective equipment needed.

In an emergency

Phones are located:
(with emergency numbers beside them)

Fire extinguishers are located:

First aid kits are located:

The first aid trained people are:

Emergency assembly points are located:

Injury and incident reporting

All incidents, accidents and near misses must be reported to the owner/manager.

Incident report forms make up part of the safety management system.

If you don't report an incident, accident or near miss, the business won't get the opportunity to look at the situation that caused it. This means that it could happen again with far greater significance!

All injuries or illness must be entered in the injury record book. It is located in:

Children

Children should only be present with the approval of the owner/manager and must not be left unsupervised.

Children are not to play in work areas including:

- the dairy at any time
- workshops
- machinery and machinery sheds
- haysheds and feed bunkers
- near dams or effluent ponds
- silos/feed sheds.

Children are not permitted as passengers in or on:

- tractors
- quad bikes
- in the back of utes or trucks
- any machinery.

Smoking

Make sure all butts are extinguished and disposed of safely. Take particular care during fire season.

Note: Smoking is not permitted in any vehicle or building or near hay/haysheds.

Personal health and hygiene

Ensure hands are washed, including children after being near animals and animal manure.

Washing facilities and toilets are located:

Vehicles

Vehicles should be parked:

Please abide by speed limits and be aware of children and other pedestrians.

Farm records

Action plan

Action plan for farm:	
Person doing Action plan:	Date: / /
People consulted:	Date for review: / /

What is to be done? (description of the action and resources needed)	When will it be done?	Who	Date completed	Status
			/ /	
			/ /	
			/ /	
			/ /	
			/ /	
			/ /	
			/ /	
			/ /	

*** File this completed form in the relevant farm folder and retain for two years ***

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