WOOLSHED SAFETY

A **PRACTICAL** GUIDE

PRIMARY INDUSTRIES HEALTH AND SAFETY PARTNERSHIP

AUSTRALIAN CENTRE FOR AGRICULTURAL HEALTH AND SAFETY

THE UNIVERSITY OF SYDNEY

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Introduction

This Safety Guide - Its Purpose

The sheep and wool industries are key agricultural sectors in Australia. However, those working in the industry are at a high risk of injury and illness associated with their work. Poor health and disability due to injury is placing unnecessary stress on people engaged in this work. This adds to the cost of production in several ways: (a) medical and hospital costs; (b) replacement labour; (c) higher Workers Compensation claims and premiums; and (d) damage to plant and equipment, all of which reduce farm productivity and profitability.

This safety guide aims to assist sheep and wool producers to improve health and safety by identifying safety hazards and outlining options to control safety risk in the woolshed. It is not designed as a compulsory standard which you must meet. However, issues that are the subject of specific legislation are noted.

All persons involved in work around the woolshed should participate in the identification of hazards, however the primary responsibility to ensure effective control options are implemented rests with the person conducting a business or undertaking (PCBU) that includes the owner-manager or employer.

Although not exhaustive, the safety control options listed are presented as an industry guide to a range of short and long term solutions. In selecting control options, you should consider how practical and cost effective these options may be for your farm business.

Whatever options you adopt, it is important to note that by planning and recording the steps taken to control risk, you will improve the safety of your farm. This will also provide direct evidence of your efforts in managing safety as required by WHS legislation.

Action to improve health and safety in the industry is not only a responsible step to take in terms of human health; it is a legislated responsibility under Work Health and Safety Acts and Regulations in each State. For all these reasons, it makes good business sense to manage safety and reduce the high cost of injury.

This document has been produced through a process of consultation with industry representatives and has been funded by the the Primary Industries Health and Safety Partnership.

Our appreciation to Michael Lawrance for permitting use of relevant materials developed in the AWU Shearing Code of Practice.

New Technologies

The development of new technologies which have the potential to improve health and safety require on-going monitoring. In adopting new technologies, it is vital that old hazards are not replaced with new hazards.

Current advances in the industry include:	
• Sheep propulsion devices in stock races	• Sheep manipulators for shearing and crutching
• Handpiece design and modifications	• Air compressor board cleaning
• Wool table modifications - feed to press	• Shed design alterations
• Systems for shearing/ crutching	

Modifications should be assessed on the basis of:	
• Repetitive Strain Injury	• Ergonomics
• Guarding	• Fumes
• Noise	• Electrocution

Wool and sheep producers should use this document in association with the *Work Health and Safety in the Sheep Industry* management package - a practical management tool for implementing and managing WHS. These resources are available from the Australian Centre for Agriultural Health and Safety www.aghealth.org.au and Farmsafe Australia www.farmsafe.org.au websites.

The resources have been prepared under the direction of a reference group established by the Australian Centre for Agricultural Health and Safety comprising of wool and sheep producers.

Health and Safety - Working in Woolsheds

People working in woolsheds are exposed to risks of injury associated with a range of hazards, some are specific to woolsheds, others are common across agriculture.

Hazards associated with sheep and wool production include:

- Mechanical hazards - machinery (wool press, grinders and shearing plant) associated with shearing, pressing), manual handling wool bales, (loading and transporting wool

bales), vehicles (trucks, quads, utilities) transporting pople and produce and hand-tools (foot parers, hand shears, syringes)
- Biological hazards - infections and infectious diseases e.g. leptospirosis, Q fever, orf, scabby mouth
- Chemicals - dips, drenches, blowfly and foot rot treatments
- Dusts and fumes
- UV and solar radiation - heat and cold, working outdoors in heat and sunlight
- Electricity
- Noise - causing hearing injury loss and tinnitus
- Stress and fatigue

The types of injury range from death, serious injury requiring hospitalization and downtime, to "nuisance" injury that stops work for a short time, or makes work slower and reduces productivity.

Legal Obligations

All states and territories with the exception of Victoria and Western Australia, have adopted harmonised model WHS laws. However, regardless of this variation the fundamental obligations are similar in all jurisdictions. Employers or a Person Conducting a Business or Undertaking (PCBU), have responsibility for the safety of all people working (employees, contractors and visitors). In addition, all people have responsibilities to reduce the risk of injury and illness associated with work.

If contractors are used (e.g. shearing team), then there is a joint responsibility between the farm owner/manager and the contractor. The farm owner/manager is a PCBU, but the shearing contractor is also a PCBU (as they employ the team members) and they are simultaneously a worker, as they are undertaking work for the farm owner/manager. The farm owner/manager and the contractor, must work together with all workers to meet health and safety responsibilities.

Responsibilities of a *PCBU or Employers* include:

- Involving and consulting with workers to implement and manage their health and safety
- Providing a safe workplace and organising safe systems of work
- Maintaining work areas, machinery and equipment in a safe condition
- Assessing health and safety risks to workers and others in the workplace and implement effective risk controls i.e. eliminate the hazard where reasonably practicable
- Providing information, training, instruction and supervision to workers on safe work and using machinery safely
- Ensuring safe use, handling, storage and transport of dangerous goods and hazardous substances
- Providing adequate facilities for the welfare of workers

- Planning for emergencies
- Ensuring the effective rehabilitation and early return to work of injured workers.

Workers (employees and contractors) also have responsibilities. Workers:

- Must co-operate with management in their efforts to comply with health and safety obligations
- Report hazards in the workplace
- Follow all reasonable safety instructions given to them, and
- Work safely so they are not injured and not to cause injury to others at work.

Manufacturers, designers and suppliers of plant, machinery and hazardous substances for use by people at work, must make sure that they are safe and without risks to health when properly used. They must also supply adequate information to ensure its safe use.

Each of these WHS obligations must be met by the business on each individual farm.

Finding and Fixing Safety Problems

The key steps that must be set in place to manage WHS risk are:

Involve your workers - Consultation

There must be ways for workers to actively participate in the management of WHS in the business.

How the PCBU, employers and managers involve workers will differ, some methods may include:

- Nominating a safety representative from the contract team to discuss issues with the farm owner/manager.
- Regular meetings (toolbox talks or more formal meetings), where safety issues are discussed and resolved
- When contract teams arrive, ensure they are inducted
- Safety committees and safety representatives who are nominated to have specific responsibility for liaison between workers (employees and contractors) and the PCBU /managers

Whatever system is in use, it is essential that there is a clear commitment to safety by the owner, manager and workers and that this is obvious by their safety behaviour and daily farming activities conducted by employers and workers.

Look for unsafe conditions and unsafe practices - Hazard identification

Safety hazards must be identified systematically. This means that farmers, managers and workers must identify those jobs and situations that may cause injury or illness, not only to people working (including contractors), but also to bystanders and visitors.
Hazard identification should be ongoing and be carried out:

- At least annually, or
- When systems are changed - i. e. when new equipment is purchased, facilities and/ or work practices are changed.

All workers should be actively encouraged to report anything that could be considered hazardous to their health and safety - any unsafe condition, or unsafe action needs to be identified and steps taken to make the system safe.

For each hazard, consider the likely outcome - ***Risk assessment***

Risk associated with each hazard must be assessed in terms of the severity of the potential harm that could occur and the likelihood that such an outcome could occur. This is generally greater if workers are frequently exposed to the hazard.

Risks must be controlled to prevent injury. Control risk using the hierarchy of control approach - ***Risk control.*** The ***hierarchy, or order of effectiveness***, is as follows:

Eliminate Hazards

Where reasonably practicable, hazards must be eliminated, or removed from the workplace. This is obviously the most effective way to reduce risk. While it is often not possible to eliminate a hazard, WHS regulations require employers use this option where reasonably practicable. If it is not possible, then the next most effective solution should be sought and put in place.

Substituting for a hazard of lesser risk

Where it is not possible to eliminate a hazard altogether, consider whether the hazard can be substituted for something that will do the same job but is less risky.

Isolation of Hazards from workers and other engineering controls

In most hazardous situations it is possible and practicable to improve the design of work and/or isolate the worker from the hazard. This is the basis of many of the safety improvements that should be put in place to reduce the risk of injury as well as to be compliant with WHS regulations.

Administrative Controls

Administrative controls include Safe Operating Procedures or rules, organising work in such a way that reduces risk. It also includes giving safety induction and training to workers, supervising unskilled workers and providing safety information to workers about the safety risk associated with the work to be done and how these risks can be minimised.

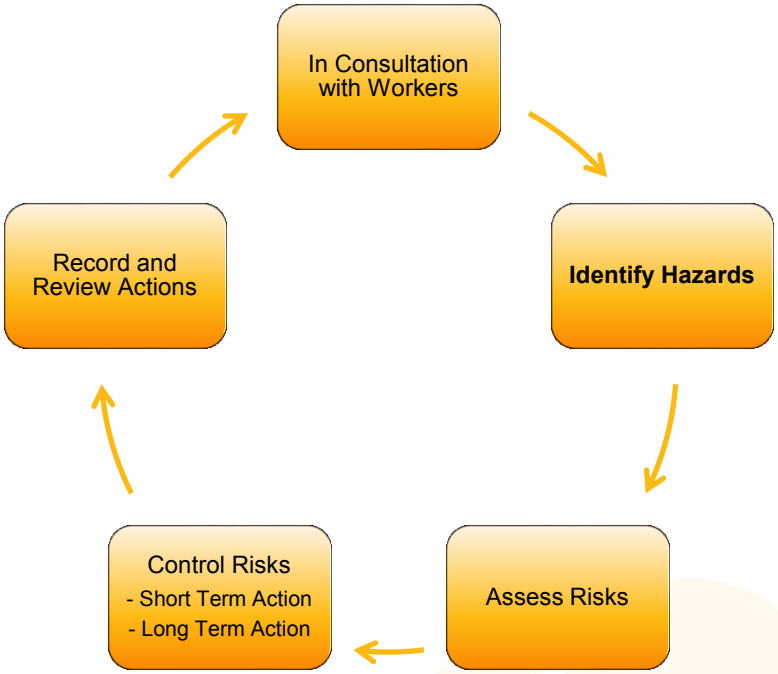
Personal Protective Equipment

Personal Protective Equipment (PPE) must be provided and used where workers cannot be protected from a hazard by a control measure higher up the order. This includes providing helmets to protect from head injury for riders of quads, motorcycles, side-by-side vehicles and horses.
These guidelines suggest the higher order controls in the first instance, with the lower order, less effective controls that depend on individual behaviour, lower in the list. In practice, best practice WHS risk management will require a mix of controls for high risk hazards.

Record Keeping - Keep written records of your WHS management

Keep records of all your WHS plans and activities. It is very important to monitor progress and to provide proof demonstrating your proactive management of work health and safety issues to prevent injury - records must be kept.

These are not steps to be taken on a one-off basis. The process would be better illustrated in this way:



These steps should become a key part of managing health and safety of workers in the business.

Successful businesses invest significantly in WHS in terms of time, money and commitment at all levels. These businesses understand that overall performance of the business benefits from good WHS practice.

These businesses do not accept that the major responsibility for workplace health and safety rests in the workers themselves, rather the opposite - that safety is a key management responsibility and involving workers and contractors is a critical management skill.

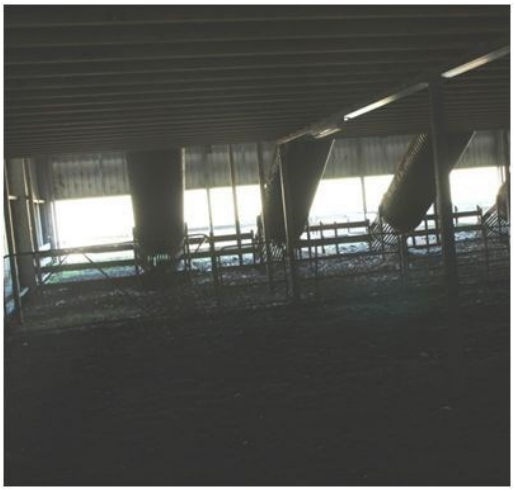
Hazards Risk and Controls

Hazards and Risks	Risk Controls
Access to the Woolshed and Shearing Boards	
Safe access to work stations can influence the risk of injury from trips, slips and falls. This may result in back injuries and fractures. In sheds operating grinders, shearing plant and wool presses can hinder safe access and result in significant injury. Variations in floor levels may also place stress on the lower back and knees. The risk of knee, ankle and lower back injury increases when jumping off or stepping down from height. In all instances, modifications to improve safe access to work stations should follow the ranking of control options previously outlined.	• Ensure steps are fitted with handrails and handrails are installed in appropriate locations. • Steps should be properly designed, in sound condition with consistent height, wide treads and a slip-resistant surface. • Steps and handrails should conform to Australian Standards and building regulations using the Australian Standard AS 1657 as a guide. • Ensure all equipment is located away from thoroughfares and traffic. • Ensure all machinery is properly guarded e.g. drive belts, wool presses and grinders. • Strategically locate equipment such as grinders in locations which • Enable access from only one direction and that are in a separate area to the work stations for other shed workers. • Place warning signs/ stickers of hazards in areas to remind workers of hazards and controls.

Hazards and Risks	Risk Controls
Pens and Races	
In some instances, poorly designed and maintained sheep pens, races and gates expose workers penning-up to an increased risk of injury. This includes trips, slips and falls which may result in back injuries and fractures. Additionally, in sheds where there are sharp edges, protrusions and splinters; workers penning-up are at an increased risk of receiving cuts and sharp objects embedding in the skin. Modifications to improve the safety of pens and gates can include:	• Ensuring that gate hinges, catches, railings and stops are well maintained and in good working order. • Inspecting pens and gates for protrusions and sharp edges prior to each shearing; these are repaired as required. • Consulting with workers and incorporating design information from relevant sources when modifications to the design of pens are considered. • Ensure workers penning-up are trained in their work.
Catching Pens and Gateways	
The impact of catching pen and gateway design can influence the risk of injury. The physical size of the pens may result in excessive lifting and dragging of sheep if they are too large, or restrict maneuverability if too small. Protruding nails, wire, plus broken wood and rails in the pen (particularly on or near gates) can result in skin punctures, cuts and bruising. Battens which run across the catching pen allow sheep to gain a foothold, restricting the ease of tipping and dragging sheep. This increases the risk of back injury to workers.	• When constructing new sheds, provision should be made for a separate catching pen for each shearer. • When constructing new sheds or altering the shed layout, consider the catching pen dimensions which provide the best trade-off between pen-ups and distance of drag. • Floor battens which run in the direction of drag are recommended. • A gradual floor slope in the catching pen toward the shearing board (75 mm in 2.5m) will assist with the ease of drag. • Ensuring pen doors are high enough to strike the shearer in the shoulder rather than the lower back. • Installing padding on the inside of door to reduce impact on the lower back.

Hazards and Risks	Risk Controls
Additionally, rotten or loose battens can result in sprains, fractures from tripping and wounds from exposed nails. The size, weight and action of the catching pen doors have injury implications. Low doors can strike the shearer in the lower back when pushed backwards by a sheep. Heavy doors can also induce back pain and strain when they strike the shearer as they drag the sheep from the pen. Gates which have a high level of resistance and hinges that do no swing freely may also contribute to increased fatigue and back strain while dragging. Pens and gates that require shearers to turn and twist sheep through angles greater than 90 degrees to position sheep for shearing, can increase back strain. Latching gates open can allow sheep to escape from the catching pen onto the board, resulting in collisions, falls from raised boards and loss of handpiece control. Obstructions or steps between the shearing board and catching pens increase the risk of trips and falls at all times, and back injury when dragging sheep to the downtube. Similarly, if the floor is wet and dirty, injuries from slips, trips and falls will be more common. Enhancing the safety of catching pens and gates may include:	• Installing gates which swing both ways to allow easy access for shearers. • Adjusting and lubricating hinges so gates swing freely and close easily. • Orientating pen gates and downtubes to enable shearers to walk backwards to the shearing position, limiting the requirement to turn the animal through angles greater than 90 degrees. • Removing all obstructions between pen gates and downtube. • The inside of pens and gates should be examined for protrusions prior to each flock being worked through the pen and repairs made. • Prior to each shearing, all boards should be inspected with loose and/ or rotten boards repaired. • Making provisions for one or two stands in each shed to cater for left-handed shearers. • Latching pen doors after catching each sheep.

Hazards and Risks	Risk Controls
Shed Floors and Shearing Boards	
The floor of the shearing board may become worn and grooved increasing resistance to drag when handling sheep. This increases the effort required by shearers and the risk of back injury. Protruding nails, loose, broken and slippery boards add to the strain required to manoeuvre sheep and increase risk of the shearer tripping and the potential for back injury.	• Before each shearing, all boards should be inspected with worn and loose boards being repaired or replaced. • Check and countersink all protruding nails. • Ensure there is sufficient floor space for all workers to perform their tasks safely including adequate distance between downtubes and the edge of the shearing board. • Floors to be clean and shearing area to be free of oil or slippery surfaces. Do not polish the area where shearers stand.
Let-Go Areas	
Obstructions preventing easy and smooth exit of sheep following shearing/ crutching, place significant strain on the shearer and increase the risk of back injury. Additionally, the placement of let-go doors or chutes in areas which funnel cold winds can increase muscle fatigue. Glare or bright sunlight filtering through the let-go area also increases the risk of cuts to shearers and sheep.	• Redesigning the let-go area, consider placement of chutes/ doorways in positions which limit glare and wind. • Ensure barriers such as wooden strips at the opening of let-go chutes / doorways are removed. • Let-go chute / doorway is located directly in front of the sheep at the completion of shearing. • Ensure chutes / doorways are large enough to allow for easy handling of large framed sheep. • Where chutes are used they should be extended onto the floor of the shearing board by up to 150 mm. • Placement of clear plastic strips at the mouth of the chute will reduce the wind blowing through the chute.

Hazards and Risks	Risk Controls
To improve the safety of let-go areas, control options may include: 	• Ensure that dogs are kept away from exit points on let-go areas to reduce sheep baulking.
Wool Room	
Sufficient space is required in the wool room to enable the wool fleece to be safely and effectively skirted and classed. There is a risk of a range of injuries due to collision with fellow workers and contact with shed machinery - influenced by the amount of space available. In addition, working on small wool tables which are not designed for the size of fleeces can result in back strain. Uneven floor surfaces increases the risk of trips, slips and falls, while sharp edges and protrusions used to support wool packs or wool bins, pose a risk of cuts and puncture wounds to those working in this area. Modifications to improve the safety of the wool room may include:	• Ensure that wool tables are large enough for the fleece and have enough room for wool rollers to work around the table without contact with shed machinery or other workers. • Ensure that the height of wool tables is appropriate for workers. • Slope the wool table toward the shearing board to facilitate ease and accuracy of throwing. • Remove protrusions on wool bins or cover with protective material. • Prior to each shearing, all boards should be inspected with worn and / or loose boards repaired. • Ensure there are enough shed hands to cope with the workload.

Hazards and Risks	Risk Controls
Loading Areas	
When the loading ramp / bay is open, there is a risk of falls. Moving bales can result in manual handling injuries. When loading bales, there is a risk of crush injuries. Approaches to improve the safety of loading areas can include:	• Fit a removable top rail to the loading ramp / bay. • Use wool trolleys / hoists to move and load bales where possible. • Use taut line trailers to restrict load movement. 
Eating Areas	
Where there is not a separate eating area outside the woolshed, a designated area for all meal breaks should be set aside with a fridge and cooking equipment.	• Meal and smoko areas should be cleaned daily. • The size of this area should be adequate for all workers, with adequate hand washing facilities provided.

Hazards and Risks	Risk Controls
Toilets and Hand Washing Facilities	
An appropriate toilet facility enhances overall hygiene and limits the transmission of disease.	• An adequate number of toilets should be provided, catering for both male and female employees. • Toilets should be cleaned daily. Hand basins, soap and clean hand towels should be provided.

Woolshed Environment

Hazards and Risks	Risk Controls
Noise	
Hearing damage (Noise Induced Hearing Loss or NIHL) is a typical injury associated with agricultural production where workers are exposed to loud noise. Long hours of exposure and relatively loud levels of noise in the woolshed should be minimised where possible. To control noise in the woolshed, control options should be utilised and may include:	• Locating internal combustion engines/ motors outside of the shed and use effective sound absorbing material to limit noise. • Ensure all machinery is properly maintained and lubricated to reduce noise. • Utilise effective sound absorbing materials on noisy equipment and machinery to dampen noise. • Placing any noisy equipment in locations which enable noise to dissipate, such as close to open doors/ windows, or outside the shed. • Limit or reduce the volume of radios, CD players etc. • Wear hearing protection when necessary to reduce exposure to loud noise from the wool press and motors.
Lighting	
Low lighting or in some instances glare can increase the risk of cuts to the shearer. Excessive glare or poor lighting levels may place extra strain on the eyesight of shed workers resulting in headaches, fatigue and decreased work capacity. Efforts to ensure appropriate lighting levels in sheds may include:	• Ensure all lights are bright enough and of adequate wattage. Replace worn bulbs and neon tubes; make sure they do not flicker or cast shadows and are cleaned prior to shearing or crutching. • When re-designing new sheds, ensure lighting is adequate and that measures such as blinds are in place to control glare from skylights and windows. • Paint the walls around the work areas with a white or light blue paint.

Hazards and Risks	Risk Controls
Electricity	
Workers can be electrocuted where electrical wiring is damaged or appliances are faulty, especially where there is no Residual Current Device (safety switch) fitted to power boards. 	• Ensure all electric power circuits are protected by a Residual Current Device fitted to the power board. • Check that all electrical cables are in conduit and have an electrician repair or replace all damaged or worn electric cables. • Regularly inspect and test all electrical appliances. • Check and repair or replace all damaged or worn extension cords, especially those running over edges of corrugated iron and over metal roof trusses. • Regularly check that the RCD is working by testing the RCD (push the Test button) and check that the safety switch trips. • Suspend extension cords on purpose installed electrical suspenders to prevent coiled wire and trip hazards.
Dusts	
Dusts in the yard and shed can initiate asthma attacks and other respiratory illnesses in susceptible people. In addition, the risk of contracting Q-Fever for all people in and around the shed is increased. To control dusts in the woolshed, the following controls can be used:	• Spray yards with water to settle dust before yarding sheep. • In raised sheds, restrict sheep from camping under the shed to reduce the level of air-borne dust. • Thoroughly clean shed prior to shearing or crutching. • Encourage all workers to be vaccinated against Q Fever.

Hazards and Risks	Risk Controls
Temperature	
The range of extreme climatic conditions under which shearing and crutching work is often completed, can have significant impact on the health of all shed workers. In particular heat stress and heat stroke are specific problems.	• Installing industrial fans or evaporative air conditioning in new woolsheds. • Using portable industrial evaporative coolers. • Ensure exterior covering reflects rather than absorbs light e. g. the roof is painted a light colour as opposed to a dark colour. • Insulating the interior of the shed. • Vents strategically placed at or near the ridge of the roof. • Strategically placed windows that open and close adjacent to the work areas. • Ensure all windows and skylights have blinds. • Letting-go chutes / doorways are orientated away from cold prevailing winds. • Shade trees and windbreaks are placed strategically around shed and yard. • Clear plastic strips are used on letting-go chutes/ doorways to restrict cold drafts. • Have a refrigerator for storing cool water. • Adequate intake of drinking water between 600 - 800 ml/hour. • Balance and pace shearing activities throughout the day. • For part time shearers or those re-entering after a period away from the activity, they should be encouraged to exercise and take care. Only undertake a suitable amount of work until fit.

Hazards and Risks	Risk Controls
Fumes and Ventilation	
Fumes from petrol or diesel engine exhausts which power equipment and may be released within the shed, such as wool presses, can be dangerous. Ammonia odours from stock urine can also encroach on the working environment. To improve the safety of ventilation in the woolshed, control options may include:	• Using electric driven equipment where possible. • Locate the internal combustion engines outside of the shed and run flexible hydraulic lines to the wool press. • If the motor is located in the shed ensure it is adequately guarded and that exhaust fumes are expelled to an area outside the shed where it will not be blown back in by prevailing winds. • Ensure that all seals on exhaust systems are working effectively and not leaking. • Ensure windows are open prior to start-up of fuel driven equipment. • Limit the production of ammonia odours by regularly cleaning out manure from under the shed.

Hazards and Risks	Risk Controls
Hazardous Chemicals	
Many pesticides used to control parasites in the sheep industry are classed as hazardous chemicals under various State pesticide laws. These include chemicals used for blowfly and lice control. Contact with these chemicals may be through direct application to stock, or through residues when handling wool during crutching and shearing. The active ingredients may contain organophosphates (OPs), synthetic pyrethroids (SPs) or other compounds. Other hazardous chemicals that are used in and around the woolshed and require proper management and storage are chemicals used to control foot rot; herbicides and insecticides for cropping and pasture management; solvents, rodenticides, veterinary medicines and chemicals to control internal parasites and worms. People vary in their sensitivity to pesticide exposure at similar levels. What may cause symptoms in one person may not pose an obvious problem to another. Although the wide range of pesticides have marked differences in terms of toxicity and health impact, all pose a short term risk of acute poisoning in humans. The long term health effects of acute, repeated low levels of exposure remains unclear for most pesticides. However, there is emerging evidence of long term neurological damage associated with OP exposure resulting in damage to long nerves of the arms and legs, and reduction in the ability to think clearly.	• All unwanted/ out of date and currently banned hazardous chemicals should be removed and disposed of properly. • All products should be stored as described on the product label and in accordance with current guidelines (contact your State regulatory authority - see contacts at the back of this guide). • Store pesticide containers, equipment and clothing away from the woolshed and in accordance with pesticide regulations (contact your State regulatory authority - see contacts at the back of this guide). • In the woolshed, never store foodstuffs for human consumption and farm chemicals in the same fridge. • Ensure that Withholding Periods following ectoparasite treatments are complied with so that workers are not exposed to chemical residues in wool. • Blowfly treatment required at the time of shearing should be done outside the confined area (inside) the woolshed. • An appropriate system for stock requiring blowfly treatment would include shearers using a raddle to mark sheep before let-go. • Pest control should always consider the range of options to reduce pest burden including Integrated Pest Management and the use of less toxic chemicals. • Design and locate jetting systems to ensure that spray does not drift into shed.

Hazards and Risks	Risk Controls
The fact that all consequences of pesticide exposure remain unknown, has significant implications in terms of potential litigation if illness can be associated with exposure. All hazardous chemicals are subject to national and state regulations which require specific actions to control risk. In all instances, the Directions for Use and Storage of chemicals on product labels must be complied with. To minimise the risks posed by hazardous chemicals, control options should be based on the ranking of control and include:  	• Ensure all hazardous chemicals are used only in accordance with the Safety Directions on the label, Safety Data Sheets or industry guidelines. • All workers who handle or use pesticides should have completed proper training in chemical usage (Farm Chemical User Training). • Only individuals who are required for the job should be in the operational area. • After careful consideration, it may be preferable to employ skilled contractors with safer equipment to jet or dip sheep. However, you continue to have WHS responsibilities in conjunction with them. • Use Personal Protective Equipment and clothing to prevent or minimise exposure to pesticides and hazardous chemicals. • Ensure relevant safety equipment is available to workers and is maintained in good operating condition.

Machinery

Hazards and Risks	Risk Controls
Overhead Gear and Shearing Plant	
Contact with overhead drive shafts either directly or by contact with clothing, towels or fleeces can result in significant injuries. Similarly, portable stands which are not properly fitted and secured can result in serious injuries. There needs to be an adequate distance between downtubes for shearing large framed sheep, otherwise collisions and loss of control of the handpiece may result in serious cuts and injury to shearers. Spring tension and the length of the downtube can influence and increase the level of "play" in the downtube, resulting in excessive hand, wrist and arm effort. Additionally, worn out downtubes and handpiece backjoints can lead to increased vibration, noise and overheating. In instances where safety clutches are not fitted, removed or incorrectly adjusted, the risk of injuries to shearers is increased. The location of on-off ropes which are not easily reached, can increase the risk of injury in the event of an emergency and increased back strain due to the requirement for twisting to reach ropes.	• When designing or re-designing shearing sheds, ensure that adequate space is provided between work stations and areas. • Ensure the drive shaft is high enough to avoid physical contact with raised arms and that adequate guards are in place to minimise the risk of clothing, towels or fleece becoming entangled in the shaft. • Ensure platforms and portable stands are secure. • An emergency stop mechanism is fitted to disengage overhead shaft driven shearing machinery. This must be easily, safely and quickly accessible from both the board and wool room. • Replace worn springs and parts on shearing plant. • Ensure pull ropes are not worn, replace worn or damaged pull ropes. Make sure pulls are long enough and are located so the shearer can reach it without twisting or being obstructed by the downtube. • Ensure there is a proper and secure fixing point for back harnesses available for each stand. • Discourage shearers using the overhead gear as a location to hang toweling, cutter and other gear. Provide other suitable alternatives for shearers.

Hazards and Risks	Risk Controls
	• Discourage nails being used to hang personal gear, provide cup hooks and discourage their use at eye and head height. • Prior to work in the shed, ensure all machinery including overhead gear, downtubes and safety clutches are serviced and checked that they are working properly. • Ensure a clutch tension wrench is available in the shed during crutching / shearing.
Shearing Handpieces	
Handpieces which are not functioning optimally may have an impact on the hand and arm workload of shearers. This extra force increases workload and can result in added fatigue and injuries such as cuts, "squeaky wrist" from vibration and burns from overheating handpieces.	• Ensure a correctly operating and adjusted safety clutch is fitted to all handpieces. • Check and replace all pin drives with worm drives. • Ensure all handpieces are properly maintained and worn parts are replaced. • Utilise technological advances as they become available e. g. Ramswitch, SLAMP. • Reduce the intensity of shearing using a smaller team and spreading shearing over a longer period.

Hazards and Risks	Risk Controls
Wool Press	
Wool presses which enable body parts to become entrapped in the press are a significant hazard. Additionally, injuries from hydraulic hoses which burst under pressure can result in burns and penetrating injury from hydraulic fluid being injected into the skin and underlying tissues. 	• Fit the press motors with an Emergency Stop in easy reach of the press operator to stop the motor in an emergency. Check that the Emergency Stop is working before use. • Ensure the wool press is fitted with a functioning interlocking door mechanism which prevents the operation of press without doors being fully closed. • Make sure the wool press is fitted with a functioning trip bar which stops operation of press if bar is "tripped" by an operator or bystander. • Inspect hydraulic lines for leaks prior to operation. Replace or repair worn and leaking hydraulic hoses/ lines and joins. • Ensure that the press is conveniently placed but not obstructing the work of others. • Ensure operators of press are adequately trained. • Check the wool press for protrusions and sharp edges prior to operation and repaired if necessary. • Test for noise levels and have hearing protection available for pressers and other workers in close proximity to the press.

Hazards and Risks	Risk Controls
Grinders	
Common injuries from grinders are serious cuts to a range of body parts and foreign objects/ bodies embedding in the eye. 	• Ensure grinders are adequately guarded. • Grinders are securely anchored in position. • The location of grinders in the shed should be in a non-traffic area, with good levels of lighting. • The direction of spin should be away from work areas and flammable materials including wool packs. • Provide and ensure workers use safety glasses and hearing protection when grinding combs and cutters.

Work in the Shearing Shed

Hazards and Risks	Risk Controls
Penning-Up	
When penning-up, the major risks of injury to the penner includes slips, trips and falls due to either contact with sheep or pen barriers, butting by sheep, jamming fingers, cuts from protruding/ sharp objects and dog bites.	• Effective re-design of pens and gates to promote stock flow reduces the need to "push" sheep into the filling pen. • Identifying, repair and removal of protrusions and sharp objects on the pens prior to their use. • Muzzle dogs to prevent them biting sheep and workers.
Shearing and Crutching	
Injuries associated with shearing and crutching are prodimantly back injuries from animal handling, cuts from handpieces and shears, falls from raised boards and needle stick injury. 	• Utilise mechanised shearing processes which virtually eliminate lifting and dragging of stock. • Utilising more effective and safer handpieces as they become available. • Orientate pen gates and downtubes to enable shearers to walk backwards to their shearing position, limiting the requirement to turn the animal through angles greater than 90 degrees. • Have secure mounting points in appropriate positions relative to the downtube for back harnesses. • Have at least one work station that can be modified to suit a left handed shearer. • Use back harnesses and other supportive apparatus.

Hazards and Risks	Risk Controls
	• Prior to shearing rams, negotiations between the owner/ manager and contractor / shearing team members can take place to determine a suitable method for shearing which allows for adequate support to be available to shearers in the event of a ram becoming free on the board. • The extra support person(s) can than be used to disengage shearing plant in the event of an emergency and assist with re-catching stock.
Picking Up and Throwing	
Potential causes of injury to shed hands involve collisions, lifting and twisting.	• Raised shearing boards will limit the likelihood of contact with handpieces. • Raised shearing boards will reduce the level of back strain required to pick up fleece. • Wool tables which slope slightly toward the board will assist in the ease of "throw". • Ensure there are no obstacles between board and wool table.
Wool Skirting/ Rolling/ Classing	
Injuries associated with skirting, rolling and classing are influenced by the size, height and shape of the wool table as well as the available space around the table. Additionally, the presence of sharp or protruding objects used to suspend wool packs or on wool bins, may result in cuts and puncture wounds.	• Ensure wool tables are large enough to handle the fleece size of the flock. • Ensure the height of the wool table is adjustable to suit the height of workers. • Remove protrusions on wool bins or cover with protective material.

Sheep

Hazards and Risks	Risk Controls
Size and Breed	
Increases in body size and fleece weight have added to the overall effort required to manoeuvre sheep during crutching and shearing. This trend for breed enhancement may continue and has implications for back injury in the industry. In some older style sheds the design is inadequate to handle the increased size of stock thereby increasing the effort required to process sheep.	• Completing appropriate shed modifications to handle the increased size of sheep, such as enlarging let-go chutes and changing the batten orientation in the catching pen. • Minimising the requirement for lifting and dragging by completing relevant modifications. • Utilise back aids which support shearers' during operation. • Empty out sheep prior to shearing / crutching.
Exposure to Sources of Infection	
Cuts, scratches and grazes which may eventuate from crutching and shearing are a common target for infection. Sources of infection may include sheep urine and manure, maggots, lice, and a range of veterinarian and agricultural chemicals. Infections may include Q Fever, Leptospirosis, Orf and Yolk boils in woolshed workers.	• Provide a hand wash basin with soap and water. • Provide and have disinfectant for use in the wash up water for combs and cutters. • Encourage washing of hands prior to meal breaks and smoking by all shed workers.
Wool	
Wet wool can influence the weight of sheep and consequently affect the level of effort required to manoeuvre sheep. Workers in the woolshed may also be subject to contact with chemical residues in wool if	• Ensure withholding periods for chemicals are adhered to prior to shearing / crutching. • Stock which are genetically selected to be resistant to specific parasites,

Hazards and Risks	Risk Controls
Withholding Periods for treated stock are not observed. Efforts to control wool wetness and residues, should include:	reduce the need for chemical usage. • Appropriate cover over pens to reduce exposure to rainfall prior to shearing. • Ensure stock are shedded overnight prior to shearing. • Stock are "empty" prior to being shedded. • If stock are wet, shearing will not take place.

Being Fit for Work

There should be a plan enabling all workers (including contractors) to participate in identifying hazards.

Workers should know how to report hazards to the owner/ manager (possibly through the shearing contractor). This will reduce the risk of injury to all workers in the shed when action is taken to control identified hazards.

Hazards and Risks	Risk Controls
Clothing	
Wearing loose clothing and inappropriate footwear increases the risk of injury. Loose clothing can catch on exposed drive belts and on unguarded machinery.	• The clothing worn should be appropriate for the job tasks and include suitable footwear which covers the whole foot.
Hygiene	
Good personal hygiene by all workers in the shed environment will reduce the risk of infection to cuts and grazes.	• Control options centre on ensuring hands and forearms are washed prior to "smokos" or meals. • Come to work with clean, freshly laundered clothes. This will help reduce the spread of infection and reduce exposure from remnant chemicals when jetting and drenching sheep.
Smoking	
Smoking in the shed poses not only a long term risk to the health of all workers but may trigger episodes of asthma in some workers.	• The principle control measure is to ensure No Smoking in the shed and smoko/ areas. • This also reduces the risk of clip contamination from cigarette butts.
Fluid Intake	
Dehydration as a result of fluid loss can lead to heat stress and heat stroke which can be life	• To prevent heat stress and heat stroke, an adequate supply of clean and cooled water should be available to all

threatening. The symptoms of heat stress include irritability, tiredness, inattention and muscular cramps. In cases of heat stroke, sweating will stop and body temperatures will be high, the skin will be hot and dry and the individual may be confused or unconscious.	workers throughout the day in the shed. • Workers should be encouraged to drink at least one cup (250 ml) of water or juice before, during (if practical) and at the conclusion of each run. Try to avoid coffee, coke or tea, as these increase urine formation and excretion, thereby increasing the amount of fluid you lose. • Overall fluid intake in hot conditions should be approximately one cup of water or juice for every 20 minutes of work time.
Warming Up	
Given the physical nature of work in the woolshed, it is necessary that adequate warm up and warm down by workers at the start and finish of each "run" is done. These exercises will assist in limiting the extent of back injury and muscle strain.	• Encourage shearers and all workers to perform warm up and stretching exercises before starting work.

Amenities and Facilities

Providing appropriate amenities is a key responsibility of the owner/ manager. The influence of amenities and living conditions on the ability of workers to complete their duties safely and effectively cannot be underestimated.

The responsibility for a First Aid kit to be located in the woolshed rests with the owner and/or manager. The first aid kit should be stocked according to any existing state guidelines and should include an instruction book.

There is a clear need for First Aid training in the industry and it is recommended that at least one person working in each shed be appropriately trained to provide First Aid, including CPR and Expired Air Resuscitation (EAR).

Hazards and Risks	Risk Controls
Shearing Quarters	
A good nights sleep ensures workers are fresh for work and reduces fatigue that may result in workers making errors leading to or causing injury. Issues relating to sleeping quarters which require specific attention and may be outlined in specific State Government regulations include: Rural Accommodation Guides, and State Shearing Codes of Practice.	• Quarters are maintained in sound structural condition. • All entry and exits points are kept clear of obstructions/ hazards to prevent tripping and falling. • Have warming and cooling available to cope with temperature extremes, including good ventilation. • Providing sufficient space for workers. • Fitting windows and doors with fly screens in good repair. • Kept clean. • Have good lighting. • Beds which are firm, clean and provide good back support. • All rooms are fitted with smoke detectors/ alarms. • All power points are protected with a Residual Current Device (RCD). • There are fire extinguishers located nearby for

Hazards and Risks	Risk Controls
	easy access and use when needed.
Toilets and Showers	
Factors to consider relating to ablution facilities which may be outlined in specific State and local Government regulations include:	• Pathways and access to facilities are clear of obstructions / hazards. • Toilets and ablution blocks are constructed to provide privacy. • Cleanliness - clean and disinfect toilets, showers and hand basins daily. • Make sure and provide an adequate supply of hot and cold water. • Ensure there are sufficient facilities for all workers, including toilets/ showers and baths. • Location of outflow/ drains in accordance with local government regulations.
Kitchen Amenities	
Key issues to be addressed in the kitchen and mess facilities include: 	• Cleanliness - keep all food preparation areas clean and free of vermin. • Refrigeration capacity - provide sufficient refrigeration to store food safely to prevent spoilage and food poisoning. • Seating for all workers - make sure all chairs are in good condition and repair. • Lighting - good lighting. • Insect screens - maintained in good repair to keep out flies and mosquitoes. • Ventilation - there should be good ventilation. • Hot water - a good, adequate supply of hot and cold water. • Drinking water - have a good supply of potable water. • Ensure power points are protected with safety switches/ Residual Current Devices (RCD).

Hazards and Risks	Risk Controls
	• There is a fire extinguisher and fire blanket available in the kitchen. • Laundry - provide laundry facilities where needed to enable workers to work in clean clothes.
Emergency Plans and First Aid Facilities	

Employers and Persons Conducting a Business or Undertaking (PCBU) should ensure there is an Emergency Plan, a First Aid kit and at least one person trained and available to provide First Aid in an emergency.
 	
The location of telephones and two-way radios with emergency phone numbers for ambulance, fire, police and emergency services should be included in emergency plans and given to all workers during a safety induction when they first begin working.
 	
First aid kits must be located within the shed and shearers' quarters and positioned so that they are visible and easily and safely accessible by everyone in the shed and quarters.
	• Emergency plans should include plans for dealing with personal injury, poisoning, electrocution, fire, explosion, hazardous chemical spills and evacuation of the woolshed, accounting for all workers.
	• The farm address (rural address location) with directions to the farm should be included in all Emergency Plans.
	• Emergency Plans should be explained and communicated to all workers during a safety induction, regularly updated and tested by conducting an emergency safety drill.
	• Everyone in the shed and in shearers' quarters must know and understand arrangements for first aid including:
	  • the location of first aid kits
	  • who is trained in first aid
	  • what to do when first aid is required
	  • what to do when it is necessary to call an ambulance or transport an injured person to a hospital or a doctor for treatment.
	• Employers should supply and maintain an appropriately stocked Fist Aid kit.
	• The first aid kit should include an instruction and advice book. The First Aid Code of Practice provides guidance on suitable contents of a first aid kit.

Hazards and Risks	Risk Controls
It is recommended that employers and employees ensure that in every shearing shed and at shearers' quarters, there is at least one person trained to provide First Aid.  	
Travel and Fatigue	
Travel has its own risks and where provided by the owner/ manager/ contractor has to be safe. Fatigue is a major cause of motor vehicle incidents and accidents.	• All vehicles should be safe and roadworthy, driven by licensed and physically competent drivers. Individuals should be physically prepared for distance driving and have clear directions to properties. • Fatigue needs to be managed. Ensure that the driver is not tired.

Managing Farm Safety | Shearing Shed | Hazard Checklist

PROPERTY NAME & ADDRESS:

PHONE: FAX:

COMPLETED BY: DATE:

ALL ITEMS NEEDING ATTENTION MUST BE ACTIONED

Hazards	OK	Needs Attention	Action/Notes
Shearing Sheds			
All access, stairs and steps, entry and exit to / from work areas are free from obstructions and safe for use			
All stairs, handrails and loading ramps are in good condition			
All step treads, rises and goings are uniform and meet the Australian Standard AS 1657 - 2013 *Fixed platforms, walkways, stairways and ladders— design, construction and installation*			
There is good lighting in the shed i.e. that illuminate:			
• Catching pens			
• Shearing board/ stands			
• Wool table			
• Wool press			
• Experts area			
The shed has good ventilation and draught control, (e.g. side flaps for use in hot conditions and to limit cold winds blowing into the shed)			

Hazards	OK	Needs Attention	Action/Notes
Is the overall noise level in the shed during shearing a risk? (If you have to shout to be heard above the noise, it is too loud).			
Where noise is assessed as a hazard, have steps been taken to reduce noise			
• Plant engines/ motors			
• Overhead gear			
• Wool press			
• Grinders			
• Radios, CD and stereos			
There is a Residual Current Device (RCD) / safety switch fitted to all electrical power boards			
All electrical wiring, power cords and plugs are not damaged			
Wool Room			
The shearing board, wool table, bins and press are well located in relation to each other to reduce manual handling			
All floor boards in the wool room in sound condition with no uneven, broken, splintered boards or protruding nails			
Moving parts on the wool table well oiled and in good working order			
The wool table at a good height for skirting			
The wool bins are free of protrusions and sharp objects			

Hazards	OK	Needs Attention	Action/Notes
There are trolleys available for moving, stacking and loading wool bales			
An appropriate fire extinguisher is available and mounted in the shearing shed			
Grinders			
All grinders are guarded to prevent injury			
Grinders are located in a no-traffic area of the shed and securely anchored in position			
Eye and hearing protection available for use when grinding			
Shed Hygiene			
The shed is clean and tidy with table and floors washed to maintain good hygiene			
Clean water is available for drinking and washing hands			
A separate wash basin is available for washing combs and cutters to that used for washing hands			
Chemicals are stored away from wool preparation and dining areas			
Yards and sheds regularly cleared of fly struck wool and / or carcasses			
Soap is available for washing hands			
All toilets are clean and supplied with toilet paper and disinfectant			
There is a designated eating / meal area with suitable seating available			

Hazards	OK	Needs Attention	Action/Notes
Catching Pens			
The drag from the catching pen to the shearing stand is as short and direct as possible without obstructions			
Floor battens in the catching pens orientated in the direction of drag and / or sloped towards the stand			
All floor boards are in a sound condition with no uneven, broken, splintered boards or protruding nails			
All pens designed for ease of catching by shearers			
All gates on pens free from protruding nails and rough edges			
All gates on pens high enough that they do not contact the shearer in the lower back when dragging sheep to the stand			
All pen gates swing easily on their hinges			
Droppings fall through slats, preventing a build up and minimizing slip hazards			
Shearing Plant			
Overhead gear guarded or high enough to prevent contact by workers			
Safety clutches are working in good condition			
All on / off ropes disengage on the first pull of the cord			
The operation of each drive has been checked and they are all in good working order			
For overhead shaft driven plant, an emergency stop mechanism is easily located			

Hazards	OK	Needs Attention	Action/Notes
All bearings on plant have been oiled and greased			
Excessive vibration or noise in the down tube, elbow joints or short gut has been fixed			
All pin drives have been replaced with worm drives			
Exhaust fumes from the shearing plant motor are not vented into the shearing shed			
Shearing Board			
All shearing boards in sound and dry condition with no uneven, broken, splintered boards or protruding nails			
There is sufficient work space between stands to handle large sheep			
If using a raised shearing board, is there enough space between the shearing position and the edge of the board			
The drag from the catching pen to the stand is straight, minimizing the amount of twisting to place sheep in the shearing position			
Let-go areas large enough for large framed sheep			
There are no barriers which cause sheep to resist exit through the let-go area			
If using let-go chutes are they extended onto the board?			
There is a proper and secure mounting for shearers' back harnesses			
Stands and drags from a catching pen have been modified to better suit left handed shearers			

Hazards	OK	Needs Attention	Action/Notes
Wool Press			
The wool press is guarded to prevent arms and hands being crushed			
There is an Emergency Stop button fitted near and in easy reach by the press operator			
All guards and safety signs are in place			
Where fitted, pressure sensing devices such as safety trip bars and interlocking devices, are tested to ensure they are working correctly			
The Emergency Stop button is regularly inspected and checked to ensure it operates properly			
The hydraulic motor, control unit and hoses have been checked and any leakages or other faults repaired			
The platen is securely attached to the hydraulic ram			
The automatic pinning device (where fitted), is operating in accordance with the manufacturers specifications			
Loading Ramps/ Stage			
There is a handrail to prevent falls when the loading ramp door is open			
First Aid			
There is a suitable First Aid kit in the shearing shed			
There is a person trained and available during shearing / crutching who can provide emergency First Aid			

Hazards	OK	Needs Attention	Action/Notes
Additional Hazards			

Further Information and Contacts

Work Health Authorities

Australian Capital Territory - WorkSafe ACT
Email: worksafe@act.gov.au
Ph: 02 6207 3000
www.worksafe.act.gov.au

New South Wales - SafeWork NSW
Email: contact@workcover.nsw.gov.au
Phone: 13 10 50
www.safework.nsw.gov.au

Northern Territory - NT WorkSafe
Email: ntworksafe@nt.gov.au
Phone: 1800 019 115
www.worksafe.nt.gov.au

Queensland - WorkCover Queensland
Ph: 1300 362 128
www.worksafe.qld.gov.au

South Australia - SafeWork SA
Email: help@safework.sa.gov.au
Phone: 1300 365 255
www.safework.sa.gov.au

Tasmania - WorkSafe Tasmania
Email: wstinfo@justice.tas.gov.au
Ph: 1300 366 322
www.worksafe.tas.gov.au

Victoria - WorkSafe Victoria
Email: info@worksafe.vic.gov.au
Ph: 1800 136 089
www.worksafe.vic.gov.au

Western Australia - WorkSafe WA
Email: safety@commerce.wa.gov.au
Phone: 08 9327 8777
www.commerce.wa.gov.au/WorkSafe

Other Contacts

Farmsafe Australia Inc
www.farmsafe.org.au
Ph: 02 6752 8218

Australian Centre for Agricultural Health and Safety
Ph: 02 6752 8210
www.aghealh.org.au

Your local veterinarian, Department of Agriculture or Stock and Station Agent may be good sources of information for health and safety and animal related problems

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