# Safe sheep handling

**JULY 2014** 



# The purpose of these guidelines is to help reduce the risk of injuries and fatalities by providing practical guidance on how to handle sheep safely.

## **ACKNOWLEDGEMENTS**

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- > Accident Compensation Corporation (ACC)
- > Beef and Lamb New Zealand
- > DairyNZ
- > Dairy Women's Network
- > FarmSafe
- > Federated Farmers of New Zealand Inc
- > Horticulture New Zealand
- > Landcorp Farming Limited
- > Lincoln University

- > Ministry for Primary Industries
- > New Zealand Council of Trade Unions (NZCTU)
- > New Zealand Dairy Workers Union
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- > University of Auckland
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# SAFE SHEEP HANDLING: KEY POINTS

Anyone working with sheep must be appropriately trained or experienced for the task

**Keep yards and woolsheds tidy and well maintained** 

Before working with sheep in the yards, leave them for 30 minutes to calm down

Avoid lifting sheep if possible. If you have to, use your legs, not your back

Always wash and dry your hands after working with sheep

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# 01/

# **INTRODUCTION**

# IN THIS SECTION:

- 1.1 Purpose
- 1.2 Scope
- 1.3 Development

# This publication is a guide to handling sheep safely.

# 1.1 PURPOSE

This guideline outlines some of the hazards you may face when handling sheep and provides recommendations on how to eliminate, isolate and minimise those hazards. WorkSafe NZ accepts these recommendations as current industry good practice. They will help you comply with the Health and Safety in Employment Act 1992 (the HSE Act).

Sheep can be unpredictable and can injure people.

This guide provides information about:

- > sheep handling principles
- > mustering
- > manually handling sheep
- > lifting sheep
- working with sheep in the yards including drafting, drenching and vaccinating
- > working with rams
- > transporting sheep

- > shearing and crutching
- > zoonoses (diseases humans can catch from animals)
- > woolsheds
- > sheepyard design.

# 1.2 SCOPE

This guide applies to sheep farmers and their employees, sheep transporters, drafters, veterinarians and anyone else who works in stockyards or handles sheep.

# 1.3 DEVELOPMENT

Industry experts helped WorkSafe NZ develop this guide. WorkSafe NZ also reviewed accident statistics, published academic literature and how overseas health and safety regulators manage the same issues.

WorkSafe NZ has made every effort to ensure the guide's recommended hazard controls reflect current good practice.



# 02/

# SHEEP HANDLING PRINCIPLES

# IN THIS SECTION:

- 2.1 The 'flight zone'
- 2.2 Balance lines
- 2.3 Catching sheep
- 2.4 Controlled holding and walking
- 2.5 Dogs

# This section outlines principles for handling sheep safely.

# 2.1 THE 'FLIGHT ZONE'

The 'flight zone' is the term for how close you can get to sheep before they start moving. Flight zones are bigger for sheep that haven't been: handled often, in contact with people, mustered or brought into the yards for a while.

Sheep move when you enter their flight zone. The closer you get, the faster they will move away. When shifting sheep, you can manage their speed by how close you get to them. Likewise, if you want the sheep to stop moving, step out of their flight zone.

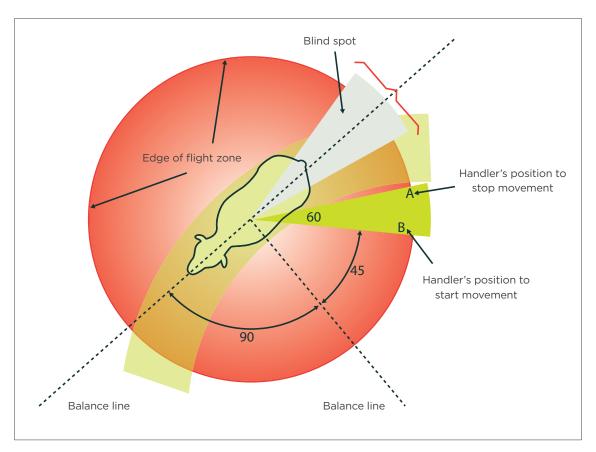
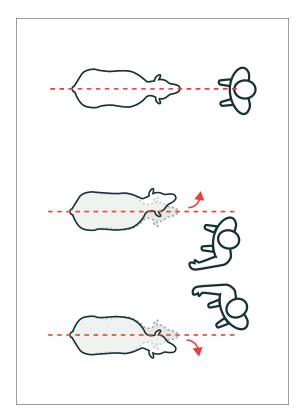


Figure 1: Flight zone



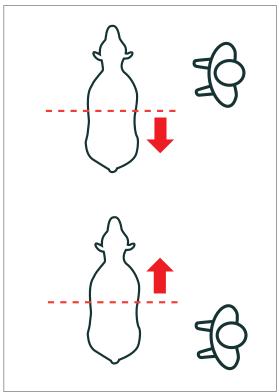


Figure 2: Balance lines

# 2.2 BALANCE LINES

There are two balance lines. One runs across the sheep's shoulders; the other along its backbone. When you're working with sheep, if you move through those lines, the sheep will move the other way:

- > If you're alongside the animal and move forward, it will move backward.
- > If you move back, it will move forward.
- > If you're in front and move to the left, it will move to your right.

# 2.3 CATCHING SHEEP

It is easier to catch a sheep if it is part of a mob, rather than by itself. Catching sheep is also easier in a pen. The smaller the pen, the better. If you can, use gates or hurdles to make the pen as small as possible. If you are in the paddock, bunch the sheep into a corner for catching.

Get the sheep into a corner, extending your arms to make a visual barrier. Approach the sheep slowly and calmly. The sheep may try to escape but will probably not move away from the wall or fence, so its moves can be anticipated.

If you can, come up quickly through the 'blind spot' directly behind the sheep. Grab it under the chin. Do not grab the wool as this causes pain, distress and bruising.

Do not chase sheep around the pen or paddock. It's tiring and potentially dangerous for both the sheep and the catcher. Sheep that are repeatedly chased become flighty, stressed and difficult to work with.

You can use a neck or leg crook, which gives you a longer reach, for catching sheep. This is recommended especially for sheep with horns. It's best to catch the sheep around the neck with a crook. You can also use it to catch a sheep by the hind leg, but sometimes this can damage the legs and udder.

### SECTION 2.0 // SHEEP HANDLING PRINCIPLES

A strong arm is needed to hold the animal while it struggles.

# 2.4 CONTROLLED HOLDING AND WALKING

The easiest way to keep a sheep still is to stand it against rails or a fence and hold it with your knees and a hand under the chin.

To walk a sheep, stand over the sheep's shoulders with a leg either side of the sheep and your hand under the chin. You can control the sheep with pressure from your knees. Walk the sheep forward by squeezing it with your knees, and/or squeezing the top of the tail with one hand, keeping your other hand under the sheep's chin. It can be difficult for a short person to walk a tall sheep in this way, so make sure it is within your capabilities.

# SITTING A SHEEP UP

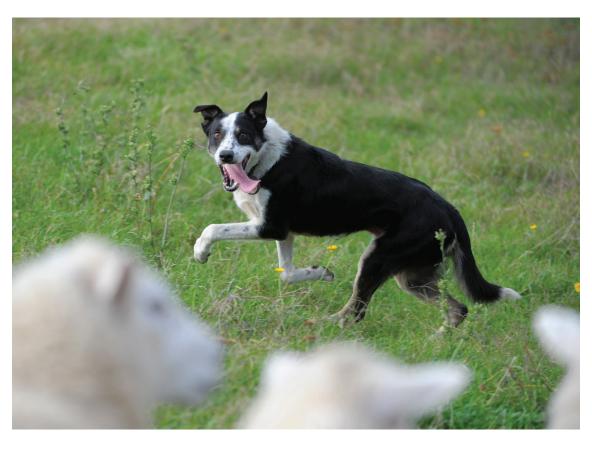
The best way to sit a sheep up is to turn the sheep's head on to its shoulder.

- In a clear area, hold the sheep against your braced knees with one hand under its chin and one on its rump.
- 2. Turn the sheep's head to the rear with one hand while forcing the rump down against your leg with the other hand.
- 3. When the sheep is no longer standing, lift the front leg and sit the sheep securely on its rump.

# 2.5 DOGS

A well-trained dog can save a farmer a lot of effort when working with sheep. Sheep see dogs as a threat, making them afraid, especially if sheep are unfamiliar with them.

If you are using dogs, they must be well trained.



# 03/

# HAZARDS AND CONTROLS

# IN THIS SECTION:

- 3.1 Mustering
- 3.2 Manually handling sheep
- 3.3 Lifting sheep
- 3.4 Working with sheep in the yards
- 3.5 Drafting
- 3.6 Drenching

- 3.7 Vaccinating
- 3.8 Working with rams
- 3.9 Loading and unloading sheep
- 3.10 Docking
- 3.11 Shearing and crutching
- 3.12 Shearing handpieces
- 3.13 Grinders
- 3.14 Zoonoses

The most common sheep handling hazards are set out on the following pages. Guidance is provided about ways to effectively control these hazards.

# 3.1 MUSTERING

Using two-wheel motorbikes and quad bikes during mustering can be risky. When mustering, most of the rider's attention is focused on the livestock, rather than on the ground. The rider might not react to sudden surface changes until it's too late.

### MANAGING THE HAZARD:

When using a motorbike or quad bike for mustering sheep, drive slowly and seek terrain where you can clearly see hazards or obstructions. Always wear a helmet.

Moving sheep quietly and slowly reduces the risk of animals going the wrong way and the risk of crashing or coming off the bike because of inattention. Sheep must be moved at a pace that will not cause exhaustion, heat stress or injury.

Make sure you prepare the route in advance. Open the gates and work out where you should be on guard – places where the sheep are likely to break away.

Use the best vehicle for the job – two-wheel motorbikes and quad bikes need your full attention to balance and control. In some situations it may be best to use the quad or motorbike to get to the paddock, then get off and muster on foot – especially if you have a good dog.

# 3.2 MANUALLY HANDLING SHEEP

Manually handling sheep is a physically demanding job. Due to the size and strength of sheep, you face problems like back strain and knee injuries when handling and restraining them.

Injuries also happen when sheep run into you and/or knock you over. Sheep are not usually aggressive but, if they are frightened, they can hurt people when trying to get away. For example, they may jump when hemmed in and stressed. They can jump with enough force to break a handler's leg, or high enough to strike a handler in the chest or face and knock them over.

# MANAGING THE HAZARD:

Use the principles of good sheep handling outlined in this guide when manually handling sheep.

# 3.3 LIFTING SHEEP

Sometimes you need to lift sheep - for example, to get them over a fence. Sheep are large and heavy animals and can fight against being lifted. This creates the potential for strains and back twisting injuries.

### MANAGING THE HAZARD:

Avoid lifting sheep if possible. Use gates and ramps where available. If you have to lift a sheep, use your legs, not your back.

Some sheep can weigh nearly 100kg. Only physically fit and strong people should lift sheep. No one should lift a sheep if it is too heavy for them.

# GOOD PRACTICE GUIDELINES // SAFE SHEEP HANDLING

To lift sheep correctly:

- A. Hold the sheep against the rail and straddle the sheep's rump. Put one hand on the rail, the other under the sheep's neck.
- B. Using the rail for support, pull the sheep onto its hind legs.
- C. Move your hand from the rail, under the sheep's nearest leg to grasp the opposite front leg.
- D. Move the other hand from the neck and firmly grasp the fold of skin between the belly and hind leg.

- E. Crouch behind the sheep, bend your knees, take the weight on your knees and hold it firmly.
- F. Stand up using your legs (not your back) and lift the sheep off the ground.
- G. Swing the sheep towards the top of the fence, boosting it with your leg.
- H. Put the sheep on top of the rail and let it see the ground.
- I. With a slight rolling movement, let the sheep fall onto its feet.

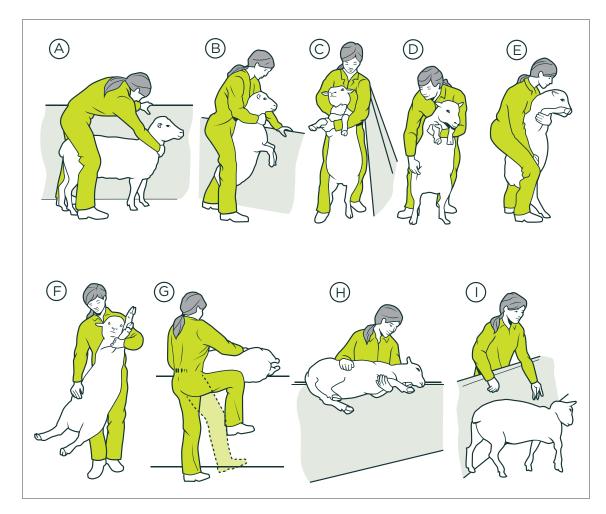


Figure 3: Correct sheep-lifting technique

### SECTION 3.0 // HAZARDS AND CONTROLS

# 3.4 WORKING WITH SHEEP IN THE YARDS

Working with sheep in the yards presents a number of hazards. The sheep are penned more closely together and this makes them agitated. They can potentially charge people, or people can become jammed between sheep and fences/rails. Sheep can also step on toes, causing bruising and breaking bones.

Other sheep yard hazards include: gates causing pinched fingers or bruising, overhanging objects that people can run into, exposed nails and broken rails causing cuts.

Factors that increase the risks:

- > agitated sheep
- > inexperienced handlers
- > infrequently-handled sheep sheep can be more difficult to handle if it's their first time in the yards or they're in new yards.
- > poorly designed or maintained yards.

# MANAGING THE HAZARD:

Before yarding sheep, make sure the yards are free of rocks, rubbish and other debris that could cause trips. Remove sharp objects that could injure people or frighten livestock.

Rocks, rubbish and debris can cause tripping injuries. They also disturb stock movement.

Check the yards for loose nails, rails and other wear and tear – fix them before using. Keep the side railing and gates well maintained for safe use.

If you're in yards where you haven't worked before, check the layout and know how things work before you take the sheep in. Check that gates are properly latched and they can be quickly opened and closed. Make sure the yard is well lit. Use torches for night work.

To help the sheep calm down, leave them in the yards for about 30 minutes before working with them, if possible.

Calm sheep are more likely to move smoothly through the yard and less likely to move abruptly or charge gates, fences or people.

To keep sheep calm:

- > Handle stock quietly and calmly don't be unnecessarily aggressive.
- > Make sure the animals can hear and see you.
- > Do not use electric prodders.

## Other tips:

- > Watch what's happening around you.
- > Understand and use the flight zone and balance lines to make sheep move in the desired directions.
- > Never put your arms between the rails and into a race or pen.
- Never stand in front of a bar used as a hock bar behind the last animal - if it is dislodged, it can swing around and hit you.
- > Close gates behind you, so animals can't enter unexpectedly.
- > Wear stout boots.

Well-designed and maintained sheepyards make a big difference to health and safety. See 'Principles of safe sheepyard design' later in this guide.

# **GOOD PRACTICE GUIDELINES // SAFE SHEEP HANDLING**

# 3.5 DRAFTING

Successful sheep drafting depends on a steady line of sheep moving up the race with steady pressure from behind.

The person controlling the drafting gate will sometimes use their body to deflect or stop sheep. Any body part put into the race can and will be hit by fast moving sheep. This can cause bruising or twisting and straining injuries.

### MANAGING THE HAZARD:

Deflect and stop sheep with the drafting gate if possible. Try to keep body parts out of the race.

To move sheep forward, walk along the side of the race just inside the flight zone from the front of the race to the back.

# 3.6 DRENCHING

You have to move through a tightly packed race when drenching. Sheep may push or charge your knees, causing twisting and bruising. Sheep might also rear up or lift their heads, striking you in the face. Drenching can be strenuous work, putting you at risk of an injury to your bones or muscles (musculoskeletal injury).

### **MANAGING THE HAZARD:**

Tightly pack the race when drenching.

Tightly pack sheep into a race, try to get them all facing away from you. Packing them tightly gives them less ability to get a run up and run into you. However, do not pack them so tightly you cause them to smother.

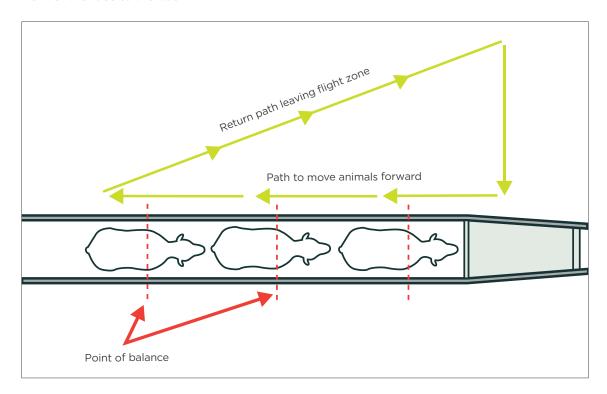


Figure 4: Moving sheep through the race

Start at the back and move through the mob, drenching one sheep at a time. Approach the sheep from behind, applying pressure to the back of the mob with your legs. Hold the sheep under the chin and insert the drench gun into the side of the sheep's mouth behind the incisor teeth and squeeze the trigger gently. Do not put your fingers into the sheep's mouth. After the sheep has been drenched, turn the sheep behind you.

Some farmers recommend having an open side gate at the back of the race so the sheep can exit after being drenched, so they don't hang around, where they could potentially leap into your back and legs.

# 3.7 VACCINATING

Sharp needles are used for vaccination. You are at risk of injecting yourself instead of the animal.

## MANAGING THE HAZARD:

Some vaccinations are dangerous to humans and should be only done by a veterinarian. Farmers who want to carry out vaccination themselves should learn vaccination techniques under supervision until they are competent.

To vaccinate sheep, tightly pack the race as you would when drenching. Make sure there is no air in the needle, then place your hand with the syringe against the sheep's neck. For an injection under the skin (subcutaneous), 'tent' the skin with the other hand. Twist the 'needle' hand and complete the injection. Always follow the label's dose level instructions.

Work out an action plan with staff in advance if someone accidentally injects themselves with a potentially harmful product.

Place needles in a sharps container and dispose of them correctly. Contact your supplier or local council for information about disposal.

# 3.8 WORKING WITH RAMS

Rams can be aggressive and can injure people by charging and butting. They are particularly dangerous in close quarters, such as in the yards.

### MANAGING THE HAZARD:

If available, use drop gates when working with rams in the race.

Take special care when handling rams. Be confident, but always keep a ram in clear view and never let your guard down.

Protect yourself when working with rams in a race. A well-positioned drop gate can reduce this hazard if one is available. Never lower your head when working with rams, they view this as a challenge and may charge and butt you.

# 3.9 LOADING AND UNLOADING SHEEP

Many of the same hazards are present when loading and unloading sheep for transport as working in the yards. It often involves working in restricted spaces with sheep and if they become stressed they can charge handlers.

Transport company staff may not be familiar with your yards and hazards, so they are at greater risk of injury.

## **MANAGING THE HAZARD:**

Maintain the loading ramp and race in good working order. Make sure the animals are fit for transport and loaded correctly.

- > Loading ramps should have non-slip surfaces. For example: wooden slats for stock inside and chicken wire on the outside (where people walk).
- > All loading ramp winch handles should have a ratchet to prevent unexpected winding and unwinding hazards.

### **GOOD PRACTICE GUIDELINES // SAFE SHEEP HANDLING**

- > Make sure the truck can line up with the race with no gaps.
- > Tell transport company staff about any hazards and safety procedures in your yards.
- > After loading, secure gates, crates and moving objects.
- > Don't load unfit animals.
- > Don't pack sheep too tightly into the truck pens.
- > The vehicle driver must secure truck doors and yard gates before driving away.

Stand stock off green feed for at least four hours (but no more than 12 hours) to prevent effluent spillage on to roads during transport. They must be provided with water during this time and it is best not to hold them on concrete. A grazed out paddock or properly prepared stand-off pad will reduce the chance of sore legs and feet and subsequent lameness.

# 3.10 DOCKING

Docking involves removing lambs' tails. Castration, ear-tagging and vaccination usually occur at the same time.

Risks involved with these tasks include:

- > musculoskeletal injury from lifting heavy lambs.
- > accidentally infecting yourself with orf (scabby-mouth).
- > burning yourself on the tailing iron.

# MANAGING THE HAZARD:

Use docking cradles and/or chutes to reduce the need to hold lambs.

- > Ensure lamb-lifters have the strength needed for the task.
- > Consider rotating tasks among workers to reduce fatigue.
- > Take care not to burn yourself with the tailing iron.

Refer to the Animal Welfare (Painful Husbandry Procedures) Code of Welfare 2005 for more information on animal welfare standards.

# **3.11) SHEARING AND CRUTCHING**

Shearing and crutching are high-risk jobs that need a lot of manual effort. Back strains are likely because the work is repetitive and done in an awkward, bent-over position.

Contractors who shear or crutch thousands of sheep each year can be at high risk of being injured. However, the less practiced farmer – who is likely to have a poorer technique and less suitable gear – is also at risk of injury.

### **MANAGING THE HAZARD:**

Use the correct techniques when shearing and crutching. Thoroughly train people doing this work.

Sheep can be crutched standing (with their head in a bail or crutching plant, or held with your knees against a rail) or sitting up (ie across the shearing board).

Use the correct techniques when catching and dragging sheep across the board.

- Hold the sheep against your braced knees with one hand under the chin and one on the rump.
- 2. Turn the sheep's head to the rear while forcing the rump down against your leg with your other hand.
- 3. When the sheep is no longer standing on its feet, lift the front leg and sit the sheep securely on its rump.

To save effort and avoid back strain when pulling the sheep across the shearing board, get the animal to walk backwards and then sit it on its rump.

Take special care of your back when shearing or crutching. Good technique avoids unnecessary pressure on the back and keeps the spine straight while under load.

- > Keep your lower back warm, particularly in draughty woolsheds. Use a back-warmer and wear more layers during breaks.
- > Take every chance to straighten and extend your back beyond straight while standing or lying down.
- > Use a lumbar support while sitting at break times.
- A back support (bungy) provides support for the upper body and is recommended for occasional short-term or ongoing back problems. When using a back support ensure it is securely fixed and avoid contact with electrical wiring.

Crutching sheep standing in the race lessens back strain and increases output, although it is usually only suitable when doing light dagging or crutching.

If you have a shearing machine rigged to an overhead rail, so it slides along when crutching in a race, make sure you have an isolating transformer at the wall socket or the mains to prevent electrocution if there is a short.

If you carry blades for crutching or shearing the occasional sheep out in the paddock, have a protective cap over the blades (made of something like canvas or leather). This stops the sharp points from digging in and wounding you in the thighs and abdomen.

To learn more about shearing safety, see WorkSafe NZ's Good Practice Guideline for Shearing.

# 3.12 SHEARING HANDPIECES

A worn out, poorly adjusted or maintained handpiece will vibrate, heat up, cut poorly and put more physical strain on the crutcher or shearer's hands and arms. They can also cause a mechanical lock-up, which can cause broken bones and severe wounds to the user and people nearby.

### MANAGING THE HAZARD:

Handpieces must be kept in good working order.

Keep the handpiece in the best possible condition and replace worn parts. Where crutchers and shearers have to supply and maintain their own handpieces, they are also responsible for keeping the handpiece in good order.

Regular safety checks should include:

- correct comb and cutter set-up on the handpiece: check screws are tight, fork pins are secure in the cutter holes and tension is on
- > the tension pin should work, stopping the tension from releasing
- > the spline drive (connecting the handpiece to the down tube) should release easily
- > the leather guard protecting the cogs must be effective.

Use worm (spline) drives in all woolshed situations. They reduce the risk of serious injury from lock-up.

### **GOOD PRACTICE GUIDELINES // SAFE SHEEP HANDLING**

# 3.13 GRINDERS

Grinders can cause serious injuries when used incorrectly or without care and attention. The user and others nearby can be hit by flying debris, combs, cutters and even grinder disks. This can be particularly dangerous if people are hit in the eyes or face. The noise from grinders can cause permanent hearing loss.

### MANAGING THE HAZARD:

Regularly maintain the grinder. Only let people who are trained or supervised use it.

### Grinders must:

- > be well lit and securely anchored in place do not use an unsecured grinder
- > be in a dedicated area, away from hightraffic areas or only used when others are not in the area
- > be placed so the disk turns away from busy work areas and flammable materials, including wool packs
- have well maintained guards to reduce the risk of anything flying up and hitting the person using the grinder.

# Users should:

- > before each start up, check disks are secured by trying to turn disks in opposite directions at the same time
- ensure electrical leads and cables are positioned so they can't be cut or damaged by the grinder and people do not trip over them
- > use disks, nuts and washers that are compatible with the grinder
- > check the pendulum pins are long enough to hold the comb or cutter in place. Ensure the pins are in the holes before grinding each comb or cutter

- ensure the disks have stopped spinning before leaving the machine or make sure the next person knows they are still spinning
- vise safety glasses (which allow good vision) and ear protection. Users must keep glasses and ear protection in good condition. People can lose their hearing if they don't use ear protection around a grinder.

# 3.14 ZOONOSES

Zoonoses are diseases that people can catch from animals. They cause mild to life-threatening human health problems. People working with livestock may be exposed to these diseases.

Sheep sometimes have infections like campylobactor, toxoplasmosis, salmonella, acariasis, leptospirosis, listeriosis, orf and ringworm.

You can catch diseases from animals in a number of ways:

- > having animal blood, urine or faeces splashed in your eyes, nose or mouth (eg when picking up dead sheep)
- > through cracked skin or open cuts
- > breathing in dust or micro-organisms in the air
- > eating or drinking infected animal products
- > being bitten by a fly, mosquito, tick or flea that has also bitten an infected animal.

## **MANAGING THE HAZARD:**

Avoid catching diseases from animals with good health and hygiene practices.

- > Maintain vaccination and parasite control programmes, where necessary.
- > Train workers about health and hygiene practices when working with sheep and in animal areas.

### SECTION 3.0 // HAZARDS AND CONTROLS

- Make sure workers have a clean place to wash and dry their hands. It should have running water, liquid soap and a way to dry their hands, like paper towels. Buckets or troughs of water that are used by several people are not suitable. Waterless alcoholbased hand rubs can be used to sanitise visibly clean hands.
- > Tell workers to wash their hands thoroughly:
  - after touching any sheep
  - after removing PPE
  - on leaving animal areas
  - before eating, drinking and smoking
  - following accidental contamination with sheep blood, urine and body substances.
- > After washing, it's just as important to thoroughly dry your hands to avoid getting sick.
- > Make sure young children wash their hands properly.
- > Provide eating areas away from animal areas and stop workers from eating, drinking and smoking in animal areas.
- > Keep woolsheds and yards clean and don't let manure build up.
- Provide PPE to protect workers' clothing, skin and the face from touching animal body substances. For example, wear disposable gloves to examine a sheep's wound.
- If using veterinary sharps like needles and syringes - carefully dispose of sharps in a rigid walled, puncture resistant sharps container.

- > Tell workers not to touch areas (such as the muzzle) where saliva or snot can be transferred to a worker's face.
- > Tell workers to cover cuts and scrapes with a water-resistant dressing. If people are wounded at work, properly clean the wound and cover it with a water-resistant dressing.
- Injured people should seek medical advice, particularly if they have a serious and/ or open wound, or if they have a health condition that makes them more likely to become infected.
- > Isolate any sheep showing signs of illness from people and other animals.
- > Carry out a pest control program.



# 04/

# **WOOLSHEDS**

# IN THIS SECTION:

- 4.1 Sheep pens and gates
- 4.2 The shearing board

# Well designed and maintained woolsheds make it a lot easier, not to mention safer, when shearing or crutching.

# 4.1 SHEEP PENS AND GATES

People penning-up in sheep pens, races and gates can be injured from slips, trips and falls. You must take all practicable steps to manage this hazard.

Keep gate hinges, catches, railings and stops in good working order. Pen gates should be able to swing in and out. All parts and components should be free from sharp edges, splinters and anything sticking out.

Inspect pens and gates for anything sticking out and sharp edges before each shearing season, repair as needed. Counterweights fitted to gates are a serious hazard and must be enclosed.

Block out light coming from under the grating, if it causes sheep to hesitate or turn back during penning.

Very large catching pens create a lot of lifting and dragging. If they are too small, movement for catching sheep is restricted and too much penning-up creates disruption. Ideally, catching pens should hold 12-15 sheep.

## **GRATING**

Grating that runs across the catching pen allows sheep to gain footholds, making it harder to tip and drag the sheep, increasing the risk of back injury to shearers and crutchers. Grating should run towards the catching pen doors, helping shearer/crutcher tip the sheep's back towards the door more easily. This reduces twisting movements and the distance the sheep needs to be dragged.

### **PEN DOORS**

The size, weight and action of the catching pen doors create risks:

- > The top edge of the pen door should not be able to strike the shearer/crutcher in the lower back.
- > Minimise the spring resistance of pen doors.
- > Attach broad padding to the inside of doors at the height of the lower back (1.2 metres).
- Doors should be made from lightweight material, smooth on both sides and have nothing sticking out.
- > Pen doors should self-close after catching each sheep.

Poorly located catching pens and doors in the shearing down tube increase strain on the shearer/crutcher. You should be able to walk backwards from the catching pen door to the down tube without needing to twist or turn more than 90 degrees. Keep the distance from the back of the catching pen to the down tube to a minimum.

# 4.2 THE SHEARING BOARD

The shearing board is an extremely high-use area. Take all practicable steps to reduce the risk of injury.

### **FLOOR**

Slippery boards make it harder to hold the sheep and maintain stability. This increases their risk of back injury. Keep the floor in good condition; non-slip surfaces are essential – the shearing board should not be varnished. Tongue and groove wood makes a good floor because it provides good grip and is slow-wearing.

### **SPACE**

Without enough floor space, shearers/ crutchers can interfere and collide with each other. Farmers must give all workers enough floor space to do their tasks safely and properly. You must be able to work without going into the next person's work space or route in and out of the pen.

A minimum distance of 2.3 metres between the down tubes is recommended for new or renovated sheds. Also take sheep size into consideration.

# **BACK HARNESS (BUNGY) FIXING POINT**

If there aren't suitable fixing points above the board for shearers' back harnesses, they can't use them. Provide a secure fixing point for a back harness. It should be clear of any overhead shafting plant, lighting fixtures and electrical wiring, and be within reach when standing on the floor.

## CHUTES/PORTHOLES/COUNT-OUT PEN

The sheep should have a clear exit from the shearing board that needs the least effort from the shearers/crutchers. Where chutes are used, extend their entrance onto the shearing board floor by 100–150mm, with the front edge lower than the floor, for easy sheep release. Ensure chutes and doorways are big enough so it is easier to handle large-framed sheep. If modifying the count-out pen, think about putting chutes and doorways in places that limit drafts or glare.

# **WOOLSHED FACILITIES**

Provide clean running water and hygienic toilets to promote good hygiene practices and reduce the chances of people getting sick.

Workplaces should have separate eating areas in or near the wool shed for health and hygiene reasons, but all woolsheds must have:

- > clean drinking water
- > clean toilet(s)
- > clean washing facilities.

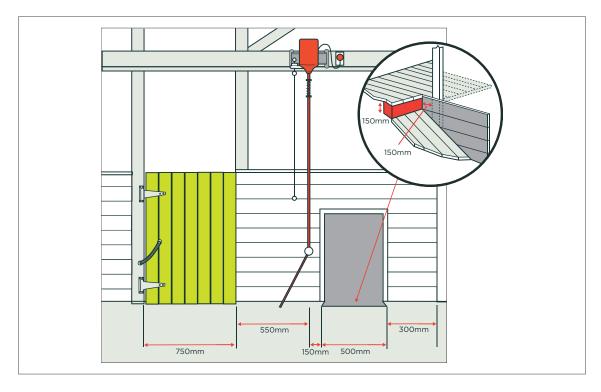


Figure 5: Shearing board design

For more information on woolsheds, see WorkSafe NZ's Good Practice Guide for Shearing.

# 05/

# PRINCIPLES OF SAFE SHEEPYARD DESIGN

# IN THIS SECTION:

- 5.1 The site
- 5.2 Orientation
- 5.3 Lighting
- 5.4 Pens and races
- 5.5 Loading
- 5.6 Keep up your maintenance plan
- 5.7 Plan long-term improvements

### GOOD PRACTICE GUIDELINES // SAFE SHEEP HANDLING

Well-designed and well-maintained yards make it a lot safer, not to mention easier, to handle sheep. If you're building new yards or adding to your existing yards, consider these principles of sheepyard design.

# 5.1 THE SITE

Ideally, the site should be level and located on a raised area. Think about the prevailing wind that can carry strange smells and noises, making handling more difficult. Good drainage for working areas is best.

To make the site safe:

- > Clear overhanging trees and shift telephone/power lines (consult an expert when doing this).
- > Ensure there's good access and space for trucks and trailers to move right off the road safely, turn and back into the race.
- > Make sure there's enough space to handle stock safely.
- If you're relocating yards, choose a site with a slight uphill gradient, good drainage and dry ground.
- > Put down a good layer of gravel or other all-weather surface.

To improve drainage:

- Vehicle access ways and stock areas should have a 100-150mm layer of coarse metal laid over a raised, well-drained base.
- > Install field or plastic drains. Otherwise, dig a drainage trench and fill it loosely with rubble.
- > Whatever drains you use, make sure they're below the surface to avoid trips and slips.
- > Remember to check that your yards meet local authority rules and regulations.

# 5.2 ORIENTATION

Think about the main flow. A good design will 'draw' livestock through smoothly. It's better if sheep are not moved with low sun shining directly into their eyes.

# 5.3 LIGHTING

Sheep yards should be well lit. Sheep are cautious animals and take time moving into dark areas. This often happens when filling a dark woolshed from a race in bright sunshine. An even spread of light, sufficient for working, is required for covered yards.

# 5.4 PENS AND RACES

The race should be sited so that when the sheep come through the race, they head up the slope in the direction of the paddocks they came from. This will help them run more freely through the race.

To make your pens and races safe:

- > Make sure they're structurally strong.
- > Make gates strong enough to stand up to stock movement.
- > Gate latches should be secure and fail-safe.
- > Fit strong, galvanized hinges designed for heavy gates.
- > Put down concrete or gravel surfaces.
- > Make races around 700mm wide.
- > Slide the hock rail completely through, in front of two posts opposite each other.
- > Make sure there are no bolts or nails sticking out on gates and rails.

# 5.5 LOADING

The sides of the loading race should be solid (with no distractions to forward movement) and high enough to stop stock climbing out. Put down non-slip, scored or stepped surfaces so stock don't slip. Rough-sawn timber grain should run towards the front of the race.

Help sheep movement by blocking out light from between the loading race rails. Have solid walls or plywood-lined walls to help with this.

Make the loading ramp 3-4.5 metres long with a 1 metre loading height for trucks. Have a 75mm spacer, flush to the race, to allow truck doors to open. Ensure loading ramps are structurally strong.

Loading ramps need to be adjustable for loading into multiple deck trucks. Consider fitting a winch system or something similar to the handle for lowering and raising the loading ramp safely. All loading ramp handles should have a ratchet to prevent unexpected winding and unwinding hazards.

Install a non-slip catwalk (eg put down nonslip mattings, timber grips or chicken wire) that allows you to move quickly and in the sight of animals.

# 5.6 KEEP UP YOUR MAINTENANCE PLAN

If you're responsible for a stockyard, you're responsible for keeping up a regular maintenance programme:

- > Hammer nails home and flatten them off.
- > Saw down bolts so they're flush.
- > Fasten or replace loose timbers on catwalks or rails.
- > Cover catwalks with a non-slip surface.
- > Look up make sure there are no branches and wires where the truck parks.
- > Lay down gravel in the approach way.

# 5.7 PLAN LONG-TERM IMPROVEMENTS

It may take time but, if you're responsible for a yard, you need to make sure safety is built in. Work out what needs doing and set up a plan. For example:

- > replace or rehang gates so they swing freely
- > build catwalks for loading ramps
- > put a shelter over the working area
- > divide large, square pens into longer, narrower ones
- > concrete the race
- > re-position the entrance gate at right angles to the fence-line, uphill or on level ground so livestock aren't moving into the sun as they enter the yards.



# 06/

# TRAINING REQUIREMENTS

# IN THIS SECTION:

- **6.1** General requirements
- 6.2 Children
- 6.3 Training for health and safety representatives

Sheep handling is a skill that comes with time and experience. Skilled handlers understand how sheep behave and react. They know where to stand and how to move. They work together and they get the sheep to do what they want, quietly, smoothly and safely.

# 61 GENERAL REQUIREMENTS

Poorly-handled animals are difficult to manage, and behave in dangerous ways. Handlers who do not know about animal behaviour could put themselves into dangerous situations.

People handling sheep should have enough experience or be well trained or supervised so they can care for the sheep, maintain animal welfare and production standards, and avoid being harmed.

Farm owners, managers and employers should ensure that anyone handling sheep has enough training and experience so they will not put themselves or others at risk.

In general, farmers need to:

- > do an induction for new employees show them around the farm and tell them about hazards and safety procedures
- identify what skills, knowledge or competencies employees need to do each task
- > have ways to train employees for example, use external training providers or do on-farm instruction
- > make sure people only do the work if they're trained and/or properly supervised
- > keep records of employee training and instruction, identifying which jobs each employee can and can't do.

# 6.2 CHILDREN

Children are at much greater risk compared to adults because they don't have the skills and experience to recognise risky situations.

Children will mainly learn safe animal handling practices through helping their parents or other competent adults. Clearly this means they will be at some risk, which must be controlled; they must be directly supervised.

Very young children (ie under 5) are at risk around sheep and should never be allowed to enter yards or paddocks unless with an adult.

# 6.3 TRAINING FOR HEALTH AND SAFETY REPRESENTATIVES

The Health and Safety in Employment Act 1992 gives employees the right to be involved in workplace health and safety matters.

One way to do this is by electing a health and safety representative. This is someone employees can go to when they have any concerns or suggestions about workplace health and safety. The representative will work with the employer in good faith to find a solution.

This representative can take two days paid leave each year to undergo approved health and safety training.

# 07/

# **REFERENCES**

# IN THIS SECTION:

- 7.1 Glossary
- 7.2 Bibliography

# 7.1 GLOSSARY

TERM	DEFINITION
Acariasis	Is a rash caused by mites. It sometimes has little bumps and is usually very itchy.
All Practicable Steps	'The steps taken to achieve the result that it is reasonably practicable to take in the circumstances, having regard to:  1. the nature and severity of harm that may be suffered if the result is not achieved; and  2. the current state of knowledge about the likelihood and severity of harm that will be suffered if the result is not achieved; and  3. the current state of knowledge about harm of that nature; and  4. the current state of knowledge about the means available to achieve the results and about the likely effectiveness of each of those means; and
	5. the availability and cost of each of those means.  'To avoid doubt, a person required by the Health and Safety in Employment Act 1992 to take all practicable steps is required to take those steps only in respect of circumstances that the person knows or ought reasonably to know about.'  (Section 2A Health and Safety in Employment Act 1992)
Balance Lines	Imaginary lines running the length of a sheep's backbone and across its front shoulders. Moving through the balance line will cause the animal to move in the opposite direction.
Bungy	A sprung back aid that reduces the load on the back from a shearer's upper body weight.
Campylobacter	A type of bacteria that causes diarrhoea, cramping, stomach pain and fever. It is one of the main causes of food poisoning.
Catching Pen	A small pen from which a shearer catches each sheep.
Chute	A slide or race between a porthole and a count out pen.
Count Out Pen	A pen where shorn sheep are put for counting.
Crush	A sturdy device designed to hold and immobilise an animal while animal handling or veterinary tasks are done.
Crutching	Shearing the rear-end of a sheep to remove wool and dags and prevent future build-up of dags. The belly wool is sometimes also removed.
Dagging	See crutching.
Docking	Removing the tails of lambs. Lambs are usually also castrated, ear-tagged and vaccinated for orf (scabby mouth) during docking.
Down Tube	A tube hanging from a shearing motor to drive a handpiece.
Draft	To separate different types of sheep.
Flight Zone	The area surrounding a sheep that - if you enter - will cause them to move.

# GOOD PRACTICE GUIDELINES // SAFE SHEEP HANDLING

TERM	DEFINITION
Forcing Pen	The pen used to hold stock before moving them into the race.
Handpiece	The part of the shearing machine that shearers hold in their hand and use to shear sheep.
Head Bail	A device usually placed in the race that is designed to trap an animal's head and hold it; usually for routine animal handling or veterinary tasks (eg dehorning, ear-tagging, castration).
Hock-Bar	A bar placed through a race that is designed to allow an animal to step forwards over it, but stop them backing up.
Leptospirosis	A disease caused by bacteria (Leptospira). It affects both humans and other animals. Leptospiral infection in humans causes a range of symptoms, but some infected people may have no symptoms at all.
Listeriosis	A bacterial infection. A person with listeriosis often gets diarrhoea or other gastrointestinal symptoms (like pain and cramps) followed by a fever and muscle aches.
Loading Race	The race animals move through on their way to be loaded onto a truck for transport.
Loading Ramp	A ramp used to load animals onto a stock truck for transport.
Orf	A skin disease caused by a virus found in sheep and goats. It causes small red lumps that grow into big blisters. It is also known as thistle disease, scabby-mouth, contagious pustular dermatitis, infectious labial dermatitis and ecthyma contagiosum.
PPE	Personal protective equipment, eg earmuffs, helmet.
Porthole	A hole at each shearing stand through which shorn sheep exit.
Race	A long, narrow pen in a stockyard that stock are forced through for drafting or other animal handling tasks.
Rear Race Gate	A gate at the rear of the race that stops stock from escaping the race.
Ringworm	A fungal infection of the skin in humans, pets (such as cats) and stock (such as sheep and cattle).
Salmonella	A type of bacteria that can infect the gut of humans and animals. Many salmonella infections are caused by eating contaminated food.
Scabby-Mouth	See Orf.
Shearing Board	An (often elevated) platform in a shearing shed where the shearing and sometimes crutching is done.
Slip Rail	A rail that can be put behind sheep in a race to stop them from backing up.
Toxoplasmosis	A parasitic disease. It can infect most warm-blooded animals, including humans. Animals are infected by eating infected meat, by eating infected cat dung and it can be passed from mother to unborn young.
Zoonoses	Infectious diseases that can pass between humans and animals.

### SECTION 8.0 // REFERENCES

# 7.2 BIBLIOGRAPHY

### **ACADEMIC PAPERS**

Code of Practice for the Care & Handling of Sheep: Review of Scientific Research on Priority Issues, M. Cockram, P. Menzies, D. Barrett, & John Hemsted. Sheep Code of Practice Scientists' Committee, National Farm Animal Care Council, 2012 (Section 1 Stressful Handling and Management Procedures)

www.nfacc.ca/resources/codes-of-practice/sheep/Sheep\_SC\_report\_Oct\_2012.pdf

# Occupational Health and Safety Risk Associated with Sheep and Wool Production

in Australia, L. J. Fragar, R. Franklin, & A. Lower. Rural Industries Research and Development Corporation, Woolmark Company, 2001

www.aghealth.org.au/tinymce\_fm/uploaded/ Research%20Reports/ohs\_risk\_sheep\_wool\_ production aus.pdf

# **NEW ZEALAND GUIDANCE**

# A Guide for Farmers to Manage Hazards in the Workplace, OSH, 1996

www.business.govt.nz/healthandsafetygroup/information-guidance/all-guidance-items/management-of-critical-factors-in-the-workplace-a-guide-for-farmers-to-manage-hazards-in-the-workplace/critical-factors-workplace-farmers-guide.pdf

# Animal Welfare (Painful Husbandry Procedures) Code of Welfare 2005, National

Animal Welfare Advisory Committee
www.biosecurity.govt.nz/files/regs/animalwelfare/req/codes/painful-husbandry/painfulhusbandry.pdf

# Animal Welfare (Sheep and Beef Cattle) Code of Welfare 2010, National Animal Welfare Advisory Committee www.biosecurity.govt.nz/files/regs/animalwelfare/req/codes/sheep-beef-cattle/sheepbeef-cattle-code-2010.pdf

# Animal Welfare (Transport within New Zealand) Code of Welfare 2011, National Animal Welfare Advisory Committee www.biosecurity.govt.nz/files/regs/animalwelfare/req/codes/transport-within-nz/ transport-code-of-welfare.pdf

# Best Practice Guideline for the NZ Shearing Industry, Department of Labour, et al., 2008 www.business.govt.nz/healthandsafetygroup/information-guidance/all-guidance-items/shearing-best-practice-guideline-new-zealand-shearing-industry/shearing-guidelines.pdf

# Survival Guide for Livestock Handlers, Department of Labour, Federated Farmers New Zealand, & Road Transport Forum, 2006 www.acc.co.nz/PRD\_EXT\_CSMP/groups/ external\_ip/documents/guide/wim2\_059364. pdf

### **GUIDANCE FROM OTHER COUNTRIES**

# A Health and Safety Guide for Handling Farm Animals and Poultry (CA)

Safe Farms Manitoba www.safemanitoba.com/sites/default/files/ uploads/animal\_web.pdf

# **Best Practice Cattle and Sheep Handling Learning Resource: Facilitator's Guide (AU)**

NSW Department of Primary Industries and Investment, 2011

www.c.ymcdn.com/sites/www.agrifoodskills. net.au/resource/resmgr/training\_packages/ livestock\_handling\_training\_.pdf

## Catching and Tipping Sheep (CA)

Les Jones. OSMA, 2010 www.ontariosheep.org/LinkClick. aspx?fileticket=K04wUEVh8Bg%3D&tabid=95

# **Circular Sheep Yard Design and Construction**

(AU) Edward Joshua. Primefacts 924, 2009, New South Wales Department of Primary Industries

www.dpi.nsw.gov.au/\_\_data/assets/pdf\_ file/0007/286855/Circular-sheep-yard-designand-construction.pdf

### GOOD PRACTICE GUIDELINES // SAFE SHEEP HANDLING

Code of Practice for the Care and Handling of Sheep (CA) National Farm Animal Care Council

**Code of Practice -** www.nfacc.ca/pdfs/codes/ sheep\_code\_of\_practice.pdf

**Web page -** <u>www.nfacc.ca/codes-of-practice/</u> sheep

# Handling Farm Animals Safely (CA) Farm

Safety Association

www.farmsafety.ca/public/factsheets/ handling\_farm\_animals.pdf

Livestock Handling (CA) Safe Manitoba.

SAFE Farms Bulletin 9, 2013

www.safemanitoba.com/sites/default/files/
resources/s.f.bltn\_9\_final\_2013.pdf

Manual Handling (UK) Health & Safety
Executive (Section on Handling and
casting sheep)
www.hse.gov.uk/agriculture/experience/

manual-handling.htm

Selecting a Sheep Handler (AU) New South

Wales Department of Primary Industries, 2009

www.dpi.nsw.gov.au/agriculture/livestock/ sheep/yards-equipment/general/handler **Sheep and Goat: Occupational Safety** 

Information (US) Animal Handler Occupational Safety & Health Program, Virginia Polytechnic Institute and State University
www.acc.vt.edu/pages/training/ohs/downloads/sheep\_goat.pdf

Sheep Care Guide (US) American Sheep Industry Association, 2006 www.sheepusa.org/get\_file/file\_id/9a0f14975be048606228762fc2d2a7ff

Sheep Handling (AU) Workplace Health and Safety Queensland, 2013
www.deir.qld.gov.au/workplace/industry/

www.deir.qld.gov.au/workplace/industry/agriculture/hazards/animal-handling/sheep-handling/index.htm#.Up7ktNHxvug

Sheep Yards and Equipment (AU) New South
Wales Department of Primary Industries, 2009
www.dpi.nsw.gov.au/agriculture/livestock/
sheep/yards-equipment

Virtual Tool Box - Section 3 Handling (CA)

Canadian Sheep Federation

www.cansheep.ca/User/Docs/VTBox/ Handling%20Section%203.pdf

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