



# Safe use of quad bikes

On average, five people are killed on New Zealand farms each year in work-related quad bike incidents. In addition, there are more than 100 severe injuries each year on New Zealand farms.

## KEY POINTS

- > Riders must be trained/experienced enough to do the job.
- > Choose the right vehicle for the job.
- > Always wear a helmet.
- > Don't let kids ride adult quad bikes.
- > Only carry a passenger if there is no reasonable alternative.

To assess the major risks and how to control them, view page 2.

The purpose of this information sheet is to help reduce the risk of injuries and fatalities by providing practical guidance on how to manage various four - wheeled motorbike (quad bikes) risks. There are estimated to be over 80,000 quad bikes in use on and around farms throughout New Zealand. They might not look it, but quad bikes are powerful and complex pieces of machinery. The rider needs to shift and use their body weight to control the bike. This is called 'active riding'.

Quad bike riding skills need to be learned through riding experience and training. Riders who are unfamiliar with the particular quad bike or farm terrain, and/or unskilled in the proper active riding techniques are at increased risk of injury.

The most common types of accident involve people falling off quads, rolling them, or hitting objects. WorkSafe New Zealand accepts the recommendations in this information sheet as current industry good practice. They will help you comply with the Health and Safety at Work Act 2015 (HSWA).

**Accepted Good Practice:** Only let people with the right training and experience ride a quad bike. Bike riders must have appropriate riding skills. To check a rider's skills, talk about safe farm bike riding with them and get them to show their skills under direct supervision. Riders must know about the best routes to take, no-go zones and what jobs can be done by bike compared to other vehicles.

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**The Law:** Quad bikes are vehicles designed for off-road use. They are not suited for travelling on public roads, mostly because they are light and offer little protection from other vehicles should you have a collision.

To be able to ride a quad bike on public roads, you must:

- > register and license the quad bike
- > hold a current New Zealand driver licence
- > wear an approved safety helmet
- > maintain a current warrant of fitness.

See the NZTA website ([www.nzta.govt.nz](http://www.nzta.govt.nz)) for further information and exemptions for quad bikes used exclusively on farm.

Under HSWA persons conducting a business or undertaking (PCBUs) must ensure the safety of workers while at work so far as is reasonably practicable. Workers also have a duty to take reasonable care of their own health and safety. To manage the risks involved in riding quad bikes at work, helmets should be worn on or off-road to ensure the safety of the rider.

## HEALTH AND SAFETY LEGAL REQUIREMENTS

The primary duties of a PCBU include:

- > providing and maintaining a safe work environment, safe plant and structures and safe systems of work
- > providing any information, training, instruction or supervision that is necessary to protect everyone from the health and safety risks at work.

Workers must:

- > take reasonable care for their own health and safety and that their actions or inactions do not harm the health and safety of others
- > co-operate with any reasonable health and safety policy or procedure of the PCBU notified to them and comply with any reasonable instruction given by the PCBU (eg using personal protective equipment).

## CHOOSING THE RIGHT VEHICLE FOR THE JOB

Quad bikes are not designed to carry passengers. If you need to move other people around the farm, use a suitable vehicle such as a ute, side-by-side or utility vehicle.

You should always follow the manufacturer's guidelines when operating a quad bike. However, in exceptional circumstances if you need to operate a quad bike outside of the manufacturer's guidelines in relation to carrying passengers. Then you must carry out a risk assessment.

If after carrying out a risk assessment you do decide to carry passengers, you can reduce the risks by taking the following steps:

- > Both you and the passenger should wear approved quad bike helmets.
- > If you are carrying a passenger you should be an experienced and competent quad bike rider.
- > You should tell the passenger how and where to sit, and to listen carefully to your instructions while the quad bike is moving.

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- > Make sure you don't go faster than 20km/h.
- > Avoid steep and uneven surfaces.

For more information about carrying passengers on quad bikes see the position statement *Guidelines on the carriage of passengers on quad bikes* available on the WorkSafe website [www.worksafe.govt.nz](http://www.worksafe.govt.nz)

## THE RIDER

| TABLE OF RISKS                        |   |
|---------------------------------------|---|
| Risk                                  | Good Practice   |
| <b>THE RIDER</b>                      | <ul style="list-style-type: none"> <li>&gt; Quad bike riders should have the knowledge, skills and training necessary to operate a quad bike safely, or are closely supervised until they are assessed as competent.</li> <li>&gt; Do not allow riders under 16 years of age to ride an adult-sized quad bike.</li> <li>&gt; Always wear a helmet while riding a quad bike. Consider wearing other PPE such as boots, high visibility clothing, goggles and clothing which covers arms and legs.</li> <li>&gt; PCBUs must make sure riders are aware of the risks associated with operating a quad bike, and the impact of their own behaviour and attitudes on these risks.</li> </ul>   |
| <b>RIDING THE BIKE</b>                | <ul style="list-style-type: none"> <li>&gt; Always use good riding techniques including smooth clutch operation, gear changing and effective braking.</li> <li>&gt; Avoid carrying passengers on quad bikes designed for one person – passengers will limit your ability to move and you won't be able to control the bike properly. Only carry a passenger if there is no reasonable alternative.</li> <li>&gt; Keep elbows away from the body for strength, and keep arms bent to act as shock absorbers.</li> <li>&gt; Select the right gear before going up or down hills and use the throttle to avoid wheel spin.</li> <li>&gt; When you're cornering at slower speeds, the rule of thumb is that you have to move your weight to the outside of the turn. At higher speeds, you move your weight to the inside of the turn. When going straight up slopes, move your body weight forward. Select a low gear and use a steady throttle.</li> <li>&gt; When riding across slopes, keep your weight on the uphill side. Avoid bumps and hollows as these can cause your weight to shift downhill.</li> <li>&gt; Look out for wires, race tapes, irrigation pipes and other objects that you could run into and knock you off the bike.</li> <li>&gt; If possible, stop the bike and get off before doing something else. If it is not possible, keep a slow speed and look at the terrain where you can see hazards or obstructions.</li> </ul> |
| <b>WORKING ALONE AND IN ISOLATION</b> | <ul style="list-style-type: none"> <li>&gt; Tell someone where you are working and when you plan to return. Carry a mobile phone or two-way radio if possible. Have regular check-in times. This will speed up a response if you do not return.</li> </ul>  |
| <b>PERSONAL FACTORS</b>               | <ul style="list-style-type: none"> <li>&gt; Never ride a quad bike under the influence of drugs or alcohol.</li> </ul>  |
| <b>CHILDREN ON QUADBIKES</b>          | <ul style="list-style-type: none"> <li>&gt; Children, under 16, may ride age appropriate quad bikes, that are designed specifically for them. You must:             <ul style="list-style-type: none"> <li>- Make sure your kids are trained before you let them on any quad bike. Ideally, arrange for them to take a professionally organised riding course.</li> <li>- Make them wear helmets and boots at all times.</li> <li>- Don't let them carry passengers – younger kids, their mates – ever.</li> <li>- Don't let them carry loads – anything that might affect their ability to handle the bike.</li> <li>- Place limits on them. Give them a speed restriction and place limits on where they can go and the type of terrain.</li> <li>- Instil good habits. Learn bad habits early and they're hard to break.</li> </ul> </li> </ul>  |

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## THE BIKE

| TABLE OF RISKS                |   |
|-------------------------------|---|
| Risk                          | Good Practice   |
| <b>THE BIKE</b>               | <ul style="list-style-type: none"> <li>&gt; Conduct a pre-operation check before riding. It is particularly important to do a pre-operation check if you are not the person who last used the quad bike, or if you have not used it for some time. Check tyres, light-bulbs, chain-drive, mirrors, brakes, clutch, throttle, fuel and oil.</li> <li>&gt; All quad bikes are different. Make yourself familiar with the bike</li> <li>&gt; Wash the bike regularly. When cleaning your bike, don't direct high-pressure hoses at the bearings - this causes mechanical problems.</li> <li>&gt; Ensure the bike is in reliable working condition by undertaking regular maintenance checks and take remedial action where shortcomings are found.</li> <li>&gt; Put security measures in place to control access to the bike and keys when the quad bike is not in use.</li> <li>&gt; Fit full footplates to protect feet when mounting and dismounting.</li> </ul>   |
| <b>TOWING AND ATTACHMENTS</b> | <ul style="list-style-type: none"> <li>&gt; Quad bikes used to tow attachments which are too heavy, too wide, or carrying an unbalanced load, may roll over - Keep within the load limits stated by manufacturers - never overload a quad bike or a trailer.</li> <li>&gt; Only use attachments designed for and compatible with the quad bike.</li> <li>&gt; Always use spray tanks with baffles fitted.</li> <li>&gt; Remember that when towing you have a lot more weight to control, especially going downhill. Balance the trailer and keep the center of gravity as low as you can.</li> <li>&gt; Riding a quad bike while carrying or towing loads requires different skills, so make sure the rider has been trained in these techniques. Use a low gear, reduce speed and allow longer braking distance when carrying a load. When riding on hills and rough terrain which can't be avoided, reduce your speed and the weight you're carrying.</li> <li>&gt; If you plan to use a quad bike to tow, there are extra considerations to take into account such as:               <ul style="list-style-type: none"> <li>- the maximum tow weight (trailer + load);</li> <li>- the maximum tongue weight (weight on hitch point);</li> <li>- the maximum quad bike load;</li> <li>- the manufacturer's recommended carrying limits;</li> <li>- the maximum front and rear load capacity;</li> <li>- how front and rear loads will affect stability and visibility.</li> </ul> </li> </ul> <p>This information should be available in the manufacturer's instructions. Remember that weight limits include the weight of the rider, the trailer and the load.</p> <ul style="list-style-type: none"> <li>&gt; Check the weight specifications for the different types of quad bike if you have more than one on your farm - they may not be the same. Other things to remember:               <ul style="list-style-type: none"> <li>- When fitting attachments, always use the mounting point or draw bar provided by the manufacturer. Incorrect connections can increase instability.</li> <li>- Do not alter the height of the mounting point or increase the towing capacity outside those provided by the manufacturer.</li> <li>- Do not reinforce the tow bar of the bike to make it stronger. This could have an adverse effect if a bike rolls with an attached implement. Instead of breaking, as it should, the re-enforced tow bar could still take the strain of the attachment and add to the force of the roll.</li> <li>- When a powered attachment is attached to the quad bike, ensure all guards are in place and that the machine can be comfortably operated from the seated position.</li> <li>- Liquid in spray tanks will move with changes in contour and adversely affect stability.</li> </ul> </li> </ul> |

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## FARM QUAD BIKE PRE-OPERATION CHECKLIST

**Note:** refer to the manufacturer's instructions for your particular quad bike for the correct specifications (for example, tyre pressure, and the correct engine temperature for checking the oil).

Check fuel, oil, and coolant

### VISUAL INSPECTION

For damaged or loose parts

For fuel or oil leaks

### WHEELS AND TYRES

Check tyres for damage

Check tyre pressure in each tyre

Check wheel nuts

Check tread depth is no more than 50% worn

### THROTTLE

Check throttle operates smoothly and freely – accumulated mud and dirt can restrict cable movement

### BRAKES

Check brakes work properly before reaching full speed

### AIR FILTER

Check air filter not choked with dirt – clean and replace regularly

### LIGHTS AND SWITCHES

Check lights and switches work

### DRIVE CHAIN AND CHASSIS

Inspect chain for correct adjustment, wear and lubrication

Check drive shaft for oil leakage

Look and feel for loose parts with engine off

### STEERING

Check that steering moves freely without undue looseness

**MAINTENANCE ACTIONS NEEDED:** For safe operation, fix any defects identified during the check before use.

Adapted from *A handbook for workplaces: Quad bikes on farms 2009*, from WorkSafe Victoria.

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