

# Safe use of tractors



On average, six to seven farmers are killed every year in New Zealand when using farm tractors. Many hundreds have been seriously injured. The majority of injuries involving farm tractors are caused by tractors rolling over or people being tangled in implements and machinery.

#### **KEY POINTS**

- > Operators must be trained/experienced enough to do the job.
- > Always wear a seatbelt if the tractor has a Roll-Over Protective Structure (ROPS).
- > Do not carry passengers on tractors that do not have instructor seats, ROPS, and safety belts.
- > Ensure PTO shafts and connections are guarded and keep clear when it is engaged.
- > Never jump on or off a moving tractor.

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

This information sheet outlines the main risks regarding tractors on the farm and provides recommendations on how to eliminate, isolate and minimise them. WorkSafe NZ accepts these recommendations as current industry good practice. They will help you comply with the Health and Safety at Work Act 2015 (HSWA).

Accepted Good Practice: Give thorough training to all tractor-driving workers. As well as training, workers must make sure that people who don't have the knowledge or experience to drive tractors are supervised by an experienced person. Training should include:

- An induction for all workers and contractors about risks, control measures and farm rules, policy, safe work procedures and how to safely use a particular tractor, implement, loader or trailer.
- > On-farm training experienced co-workers can do this.
- > Direct supervision provide this for inexperienced operators until they reach an appropriate level of competency.
- > Formal training and accreditation this provides independent, up-to-date knowledge and best practice.

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**The Law**: The Health and Safety at Work (General Risk and Workplace Management) Regulations 2016 require that a PCBU with management or control of a workplace ensures, so far as is reasonably practicable, that no worker aged less than 15 years drives or rides on a tractor.

However, this does not apply to a worker aged 12 years or over who drives on a tractor if the tractor is being used for agriculture work; and the young worker is to be fully trained, or being trained, in the safe operation of the tractor and the safe use of any implement being towed by it.

WorkSafe strongly recommends that young people on farms only operate vehicles designed for their age and capabilities.

All agricultural tractors driven on roads need a WoF if they are operated at more than 40 km/h. Tractors not requiring a WoF still have to be in good condition and safe to use on the road.

For more information see the NZTA website www.nzta.govt.nz

Tractor or agricultural vehicle drivers that drive on New Zealand roads must have at least a Class 1 Driver Licence (a car licence), so they will have studied the road code to get the licence. It is the basic guide to safe, legal and considerate road user behaviour in New Zealand.

#### **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 PBCU (eg using personal protective equipment).

#### THE DRIVER

TABLE OF RISKS		
Risk	Good Practice	
PASSENGERS	> Do not carry passengers on tractors without instructor seats, roll-over protective structures (ROPS) and safety belts.	
GETTING ON AND OFF THE TRACTOR	<ul> <li>When climbing on and off a tractor, always keep three points of contact (eg two hands and one foot) with the tractor or ground. Get off facing towards the tractor, the same as you do when getting on.</li> <li>Never jump on or off a moving tractor.</li> <li>Clean the steps regularly. You are more likely to slip and fall if the tractor steps are dirty or wet.</li> <li>Before getting off, always put the tractor in neutral, apply the brakes and disengage the power take-off, even just to open a gate.</li> </ul>	
	> If you're leaving the tractor to do something else, shut off the engine.	

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TABLE OF RISKS		
Risk	Good Practice	
LOUD NOISE	> If the tractor does not have a sound-proof cab, always wear appropriate hearing protection.	
USING THE CONTROLS	> Always work the tractor's controls from the driver's seat unless the manufacturer has specifically designed controls for use in other positions. Never start the tractor from the ground.	
TURNING ON AND CROSSING SLOPES	<ul> <li>Never turn down a slope.</li> <li>Don't work across slopes if your tractor has large diameter, tubeless, low- ground-pressure tyres.</li> <li>Plan work across slopes so you make turns uphill rather than downhill.</li> <li>Slow down before turning or crossing slopes.</li> <li>Keep alert at row ends and make as wide a turn as possible. Apply a single brake in the direction of the turn (left turn, left brake).</li> <li>Sometimes the up-hill wheel brake can be applied to maintain direction stability. This forces the bottom wheels to drive, keeping the nose of the tractor up-hill, and gives better traction.</li> <li>Don't do tractor work on steep slopes.</li> </ul>	
TRAVELLING UP/ DOWNHILL	<ul> <li>Always drive straight down and up steep hills.</li> <li>Always select a low gear before driving up/down and apply the throttle to minimise the possibility of the engine stalling.</li> <li>Engage 'diff lock' before starting a hill, either up or down.</li> <li>Climb with the heavy end up the slope (in reverse).</li> <li>If you lose control, drop any implements into the ground to act as an anchor.</li> </ul>	
YOUNG PEOPLE ON TRACTORS	<ul> <li>Children under 15 years are normally not able to drive tractors or implements.         <ul> <li>'However, children over 12 years old can drive or ride on tractors or implements if:</li> <li>the tractor is being used for agriculture work</li> <li>they are fully trained or being trained in the safe operation of the tractor and any implements attached to it</li> <li>are in a safe position on the tractor or implement</li> <li>are the only child on the tractor.</li> </ul> </li> <li>WorkSafe strongly recommends that young people on farms only operate vehicles designed for their age and capabilities.</li> </ul>	

## THE TRACTOR

TABLE OF RISKS		
Risk	Good Practice	
TRACTOR STABILITY	<ul> <li>Where appropriate, take steps to improve the stability of the tractor: <ul> <li>Widen the wheel-base (by fitting dual wheels for example).</li> <li>Add wheel weights that bolt into the wheel's centre.</li> <li>Slow down on rough ground and slopes.</li> <li>Before going up or down hills, carefully check the ground and set the tractor up to meet the conditions. You might have to get off the tractor and walk the route you plan to take. When planning your route, find an emergency run-out spot in case you lose traction.</li> </ul> </li> <li>On 4WD tractors, reverse the tyres to help with traction braking on the front axle. (Some manufacturers recommend this practice on steep land.)</li> </ul>	

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TABLE OF RISKS		
Risk	Good Practice	
TOWING A TRAILER AND OTHER HEAVY FARM IMPLEMENTS	> Do not tow a trailer or implements too heavy for the tractor. Stay within the manufacturer's guidelines.	
ROLLOVER	<ul> <li>All agricultural tractors, with some exclusion, must be fitted with Roll-Over Protective Structures (ROPS).</li> <li>All new agricultural tractors bought after 31 August 2001 must have seatbelts.</li> <li>Always keep seatbelts and anchorages in good condition.</li> <li>Seatbelts should be worn, if practicable, when a tractor has a ROPS.</li> </ul>	
HYDRAULICS	<ul> <li>Never work under equipment that's only supported by a hydraulic ram. If you have to work under raised equipment, make sure it has a stable support that can't move. Use a jack stand or other sturdy support. Don't rely on hydraulics or mechanical locks.</li> <li>Regularly check hoses for wear and tear.</li> <li>Don't put your hands around or close to hydraulic hoses under pressure. The oil can penetrate the skin, causing serious injuries.</li> <li>Before working with the hoses, jiggle the levers to release the oil pressure.</li> <li>Drivers should wear gloves and eye protection when working on hydraulic equipment.</li> <li>Work hydraulic controls from the driver's seat or according to manufacturer's instructions.</li> <li>When parking the tractor - even for a short time - lower the front and rear hydraulics to the ground. Make it part of your routine.</li> </ul>	
FRONT-END LOADERS AND FORKS	<ul> <li>Carry the load with the bucket or attachment lowered. Raising it reduces stability.</li> <li>When operating a front-end loader:         <ul> <li>Keep the speed down when carrying a load.</li> <li>Avoid sudden stops when carrying a load - the tractor could overbalance.</li> <li>Back down slopes when carrying a load.</li> <li>Lower the bucket or attachment to the ground when parking.</li> </ul> </li> <li>Train operators to use front-end loaders safely.</li> <li>Check the tractor's front-end loader has a rated lifting capacity. Consult the machinery supplier and manufacturer's specifications about lift ratings and locations. When checking the tractor's lift capacity, you may need to attach a counterbalance - carried on the three-point linkage - before using a front-end loader.</li> <li>If driving on the road, position forks (and anything else sticking out) to reduce the risk to other road users.</li> </ul>	
USING TRACTORS FOR FARM FORESTRY	<ul> <li>Use a tractor with FOPS for farm forestry tasks and work within the manufacturer's recommendation.</li> <li>Do not use wheeled tractors for directly pulling trees.</li> <li>When winching logs, don't back the tractor against a tree for extra anchorage.</li> <li>Use a bigger tractor.</li> <li>Keep cables and chains in good condition and store correctly when they're not in use.</li> <li>Watch out for dead limbs on trees - any tree movement could bring them down.</li> </ul>	
DRIVING ON THE ROAD	<ul> <li>If you're driving a tractor on the road, follow the road rules.</li> <li>All tractors driven on the road must be in good condition and safe to use on the road. This means that generally they need to meet the same requirements as tractors on a WoF.</li> <li>Check that the tractor and any implement or trailer is not over-width and has the correct signage.</li> <li>See the NZTA website for further information (www.nzta.govt.nz).</li> </ul>	

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