Tractors can kill!

Follow this and additional works at: https://researchlibrary.agric.wa.gov.au/journal_agriculture3

Recommended Citation
(1957) "Tractors can kill!," Journal of the Department of Agriculture, Western Australia, Series 3: Vol. 6 : No. 4 , Article 17.
Available at: https://researchlibrary.agric.wa.gov.au/journal_agriculture3/vol6/iss4/17

This article is brought to you for free and open access by Research Library. It has been accepted for inclusion in Journal of the Department of Agriculture, Western Australia, Series 3 by an authorized administrator of Research Library. For more information, please contact jennifer.heathcote@agric.wa.gov.au, sandra.papenfus@agric.wa.gov.au, paul.orange@dpird.wa.gov.au.
PROPERLY handled, the modern tractor is the farmer's best friend. It provides an ample reserve of power in a reasonably small compass—power that is easily controlled, highly mobile and capable of being readily applied to many tasks. Carelessly handled, the same tractor can become a menace to life and limb.

In recent years there has been a marked increase in tractor-caused fatalities throughout Australia, as well as in non-fatal accidents resulting in serious injuries and material damage.

Most of these accidents could have been prevented by observing simple common-sense precautions.

There is nothing unpredictable about a tractor as there is in the case of a vicious horse or bull. Tractor accidents are caused by human carelessness—by taking chances which should never have been taken.

Read this article carefully and check on the number of times that YOU have taken risks which could lead to tragedies.

AVOID FIRE RISKS

Tractors run on inflammable fuel—always remember the ever-present risk of explosions and fire. Keep naked lights away while handling fuel.

Don't smoke while re-fuelling; never re-fuel with the engine running or when the exhaust pipe is still very hot; if re-fuelling with cans, keep them well clear of battery terminals where a spark could trigger off an explosion.

Admittedly, hundreds of people have disregarded these precautions and are still alive, but many others have been less fortunate. Why run the risk of a horrible death or lifelong disfigurement through lack of simple precautions?

Avoid spillage of fuel. Even a normally careful person might strike a match near ground or material soaked with highly inflammable fuel.

Have fully-charged fire extinguishers handy at all times and use efficient spark arrestors to reduce the risk of crop fires.

SERVICING

Take special care if making adjustments which can only be made with the engine running. Avoid loose flapping clothing which could become entangled in moving parts.

Chock the wheels before jacking up tractors or implements and don't rely on the jacks alone if you have to crawl under the machine. It doesn't take long to put some packing under as a safety precaution.
Use care in removing the radiator cap if a pressurised cooling system is used, or if the engine is overheated.

STARTING
Because of its powerful engine and low gear ratio, a moving tractor is an almost irresistible force. Never take a chance on it moving unless you are in a position to exercise prompt and complete control.

Place all controls, gear levers and power take-off in the neutral position before starting the engine.

Use self-starter from the seat. If necessary to crank by hand, pull the handle up, keeping the thumb on the same side of the handle as the fingers. This will reduce the chances of a backfire causing a broken wrist.

Remain on the seat when backing the tractor towards the implement to be attached. Never try to work the clutch when off the tractor.

Fit attachments correctly and avoid makeshift hitches. Use the drawbar in the manufacturer's position or use the recommended three-point linkage.

When using power-drive implements make sure that moving parts are correctly shielded to avoid accidental contact.

NO PASSENGERS
Except for a few special models, the tractor is a one-man machine. Even when travelling on smooth ground it is not easy for a second passenger to find a safe place to sit or stand. On rough ground there is a grave risk of a passenger falling off the machine.

Keep children off tractors and away from tractor-operated machinery. A very large percentage of tractor-caused fatalities are children.

Driving a tractor and taking care of children are each full-time jobs—no man can do both simultaneously.

Use special care when reversing, and make sure that your vision is not obscured, especially if there is a chance of children being in the vicinity.

TRACTORS CAN ROLL OVER
Tractors and motor-cars have many points in common but because it is designed to work on rough ground or for row-crop work a tractor has more ground clearance than a car or truck.

This means that the centre of gravity is higher which, in turn, means that the tractor can overturn more easily. The centre of gravity on crawler tractors is usually somewhat lower than on wheel tractors but all tractors demand special care when being operated on sloping ground.

Tractor wheels should be set as wide as possible when working on hillsides and dual rear wheels which increase the overall width of the machine are an aid to greater lateral stability.

When one-way ploughing on hillsides, throw the soil uphill so that the uppermost wheels are in the furrow. Always watch for holes, rocks or stumps which could cause the tractor to tilt sideways—special care is needed when turning.

Keep the speed down when working on slopes or rough ground.
Keep clear of ditches or depressions where crumbling edges could cause the tractor to tilt sideways. Always cross ditches at right angles and engage the clutch gently when pulling out of ditches or going uphill. Make sure that the clutch can be disengaged promptly if the tractor commences to "rear-up."

**Braking.**

Most tractors have independent rear wheel brakes to facilitate turning on headlands. See that the brakes are evenly adjusted as uneven braking can cause a "roll-over."

When operating in high gear use both brakes simultaneously. Most tractors have a latch to interlock both pedals and this should always be in use in high gears. The application of one brake can cause the tractor to swerve sharply and turn over if travelling quickly. **Always remember that the danger of overturning increases four times when the speed is doubled.**

**REARING**

Many deaths have been caused by wheeled tractors "rearing-up" and falling over backwards, crushing the driver.

Such accidents occur most easily when ascending steep hills, but may be caused by any check to the forward movement of the tractor such as occurs when the towed implement wedges under a tree-root or rock.

Unless the clutch is promptly disengaged, the engine winds itself upward, pivoting on the rear axle and lifting the front of the tractor off the ground.

**The driver must be in a position to de-clutch promptly at the least check to forward progress.**

To further reduce the risk of rearing or rolling over: Always engage the clutch gently when moving off with a heavy load. Never "snatch" at the load.

Do not use a wheeled tractor for direct pulling out of trees and stumps. Use with block and tackle or a winch.

Pull from the maker’s towbar only and do not alter the positioning. Makeshift hitches are dangerous.

When pulling in reverse, use the front towing hook.

When descending hills, never allow the tractor to "coast". Always engage a gear to act as a brake, using a low gear on a steep slope. Have independent brakes, wherever possible, on towed equipment to prevent "jack-knifing."

**STOPPING AND PARKING**

In making an emergency stop, close the throttle, brake both wheels simultaneously and don’t bother about the clutch.

When making a normal stop always apply the brakes and lower the blades, scoop bowls or other attachments before leaving the machine. Remove ignition or starter keys if leaving the unit.

**Never dismount from a moving tractor.** Apply the parking brakes first. If you must dismount while the engine is running, always make sure that the transmission gearshift lever is in the neutral position. Where a flywheel master clutch (hand lever operated) is fitted, see that it is positively engaged.

**Always remember that diesel engines, when in gear, have been known to start on slight movement of the tractor.**

**TREE-CLEARING AND EARTH-MOVING**

When using tractors for tree-dozing, make sure that there is an adequate protective canopy fitted, and beware of trees with dry heads or dead branches. Even a strong canopy has its limits.

Stop the engine before adjusting winches and power control units.
Always chock up dozer-blades or scoop bowls before fitting new cutting edges. Chock tailgate before attempting to remove obstructions from scoop bowls.

Do not leave loose wires or cables on machines. Wind loose ends on to their respective units or drums and tie securely.

**STATIONARY WORK**

Never run the engine in a closed shed. Carbon monoxide from the exhaust gases cannot be seen or smelt but can kill rapidly.

See that the tractor is well grounded and safely chocked before using it for belt work.

Operate the clutch and power take-off from the tractor seat only.

Do not put on or remove the belt while the pulley is in motion.

Keep moving parts well shielded and do not wear loose flapping clothing which could catch in revolving belts or shafts.

(Compiled from material supplied by the National Safety Council of Australia.)

---

**Book Review**

**A CITRUS GROWERS’ HANDBOOK**

“Citrus Growing in Australia,” by Frank T. Bowman, Principal Research Officer of the Department of Agriculture, New South Wales, is a book which will fill an important gap in the available literature on fruit growing under Australian conditions. It is written in a manner easily assimilated by the orchardist, but at the same time, contains sufficient technical data to be valuable to students and extension officers.

The whole subject of citrus growing from the selection of suitable land, its preparation and planting, right through to the harvesting and marketing of the crop is dealt with in considerable detail and the orchardist will find it a very valuable reference for answers to his various problems. Considerable attention is given to varieties of citrus fruits, problems associated with various rootstocks and methods of tree propagation. Nutrition, soil management, drainage and irrigation also come within the orbit of the discussion, while an up-to-date section on the control of citrus pests and diseases is included.

Although much of the information refers to conditions pertaining in New South Wales, the basic principles are readily applied to other parts of Australia and sufficient reference is made to growing conditions elsewhere to enable a grower to apply the recommendations to his own circumstances.

This is a book well worth its place in any citrus grower’s library.—F.M.

(“Citrus Growing in Australia,” by Frank T. Bowman, Ph.D., B.Sc. (Agric.), H.D.A. Published by Angus & Robertson, Sydney. Price 63s.)