



Tractor Safety on the Farm

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Introduction

Farm safety statistics indicate that tractors are involved in the majority of machinery-related injuries in America. Although modern tractors are designed and constructed to be as safe as possible, tractor accidents continue to occur. In order to reduce the number of tractor-related injuries, safety must become a priority for those involved in agriculture.

There are many factors involved with tractor safety. This fact sheet summarizes accepted tractor safety practices and discusses underlying factors that contribute to the occurrence of tractor-related injuries.

The Human Element

Human error is the primary cause of all types of accidents. These errors in judgment and action are caused by a variety of reasons, but occur most often when people are: tired, hurried, upset, preoccupied, or careless. *Remember, the human physical, physiological, and psychological condition greatly affects the occurrence of life threatening accidents.*

In order to reduce tractor injuries, never operate a tractor when ill or upset, never take unnecessary chances, never take medications that may cause drowsiness, or consume alcohol. In addition, take frequent rest breaks and, most of all, **stay alert**.

Operators' Manuals

One of the best sources of information regarding tractor operation and safety is the operator's manual provided by manufacturers. The manual provides *vital* information about specific operating procedures and safety features of a tractor. Take time to read the manual and follow the operation and safety procedures it outlines. *Learn to become a safe, as well as efficient, tractor operator.*

Tractor Upsets

These could occur at any time and any place. Tractor upsets normally occur so rapidly that before the operator realizes what is happening and can take preventative action, it is too late. Statistics indicate that it takes less than 1 1/2 seconds for a tractor to flip over backwards.

Tractor upsets occur for many reasons including excessive speed, improper hitching, quick turns, and operating on steep slopes. When operating a farm tractor, **be alert** and

avoid potential rollover dangers. Protect self. Ensure that tractors are equipped with rollover protective structures (ROPS), and wear safety belts at all times when operating a tractor with ROPS.

Maintenance and Repair

The majority of farmers are dedicated to tractor maintenance as a means of reducing repair costs and downtime. Preventative maintenance and prompt repairs can also aid in preventing tractor accidents.

A safe tractor is a "mechanically sound tractor." It steers and stops correctly, the lights and safety devices are in good working order, and the operator has adequate visibility in all directions. Any change in these conditions renders the tractor "unsafe." Be prompt and check and repair any unsafe condition as soon as possible. Devote particular attention to loose or otherwise unsafe steering mechanisms and slipping or grabbing brakes, both are extremely dangerous.

Falls from Tractors

Cleanliness should also be a part of any good preventative maintenance program. Keeping tractors clean can preserve not only the life of the tractor, but the *life of the operator* as well. Ensure that steps and platforms are free of oil, grease, or slippery mud to prevent falls. Keep clutch and break pedals clean to prevent accidents caused from feet slipping from pedals. Keep windshields and lights clean to ensure proper visibility for both the operator and other motorists.

Refueling

The greatest potential for fire or explosion exists during refueling. **Be smart.** Never smoke or allow others to smoke while refueling. Carefully monitor tanks to protect them from overfilling. Should a spill occur, wait until the fumes dissipate before starting the tractor. Be sure to let hot engines cool at least five minutes before refueling. Ensure proper ventilation to reduce the buildup of vapors that may explode.

Run-Overs and Hitching Dangers

Annually, farmers and farm workers and by-standers are killed or seriously injured due to being run over by tractors or

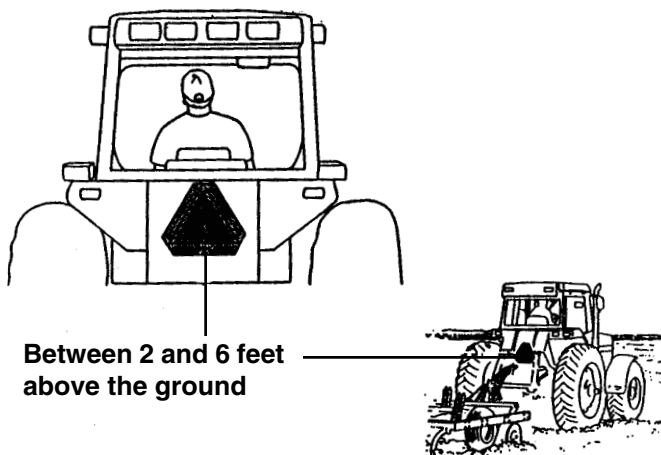
crushed when hitching equipment. Precautions to take:

- Engage the parking brake, putting the tractor in park (or in gear depending on the tractor) and stop the engine before dismounting the tractor.
- Always start the engine from the operator's platform, never from the ground.
- Check neutral start switch to ensure the tractor will not start when in gear or when the clutch is engaged. If the neutral switch is defective, replace it immediately.
- Never start the engine by shorting across the starter terminals (bypass starting).
- Be constantly alert to the location of people working.

Highway Operation

It is frequently necessary to operate tractors on public roads and highways. Operating tractors on these thoroughfares presents a special danger to both tractor operators and other motorists. To reduce the chance of collision or loss of control, take the time to properly prepare the tractor for road operation. Be sure to:

- Mount (attach) a slow moving vehicle (SMV) emblem in an appropriate, visible place. The SMV should be in good condition, if not replace it.
- Use headlights, warning lights, and turn signal lights and be sure field lights are off.
- Lock brake pedals to ensure tractor does not veer when brakes are applied.
- Adjust tire air pressure to prevent bouncing.
- Adjust mirrors and clean windshield to ensure adequate visibility.



Between 2 and 6 feet
above the ground

- Stay alert to other traffic and obey all traffic and safety laws.

Protecting Others from Danger

One can be instrumental in protecting others from danger. Protect others from needless injuries while operating farm tractors:

- Never allowing extra riders. Tractors are designed for only one person, the operator.
- Keep children away from tractors whether the tractor is moving or idling.
- Train agricultural workers to safely operate tractors and other agricultural machinery.

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