

When Two's a Crowd: Dangers of Extra Riders on Tractors¹

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It was a great day for a young boy to be out of school because he could help his dad around the farm. That afternoon they would be using the tractor to feed livestock. The boy's father thought his son would be safe in the tractor cab, like he had been many times before. He didn't expect the unlatched cab door to pop open when the tractor went over a rut. Before the father could step on the brakes, his son fell out of the cab and was run over by the rear wheel of the tractor. The boy was crushed under the weight of the tractor. The boy was rushed to a local hospital but died from massive internal bleeding. The heritage being passed from one generation to the next ended in a few tragic seconds.

This story is a compilation of details from many incidents of this kind that have occurred in Florida and elsewhere in recent years.

In most incidents involving extra riders, victims fall off or are thrown from the tractor during a rough ride or when a tractor overturns. In these situations, extra riders can be run over by either the tractor or by an implement being towed, or both. In an overturn, the tractor often crushes the extra rider.

These incidents are double tragedies because they can so easily be prevented. The information below discusses the serious risks that extra riders face.



Why Take the Risk?

Tractors are not passenger vehicles. Except for those built with instructional seats, they are built for one person to operate.

Passengers on tractors can interfere with safe operation of a tractor. The extra rider can distract the operator, block access to controls or obstruct the operator's vision.

All tractors manufactured since 1976 are designed to have a special rollover protective structure — a ROPS — that provides a safe

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environment for the operator if the tractor overturns. The use of the seat belts on tractors with ROPS will protect the operator from serious injuries.

Extra riders have no such protection. There is no safe environment for extra riders on tractors. Tractors without ROPS offer no overturn protection for operators or extra riders.

Many people have the mistaken idea that enclosed cabs protect extra riders. This notion only gives tractor operators a false sense of security. Many tractor runaway deaths happen when a child falls out of an enclosed cab. An enclosed cab can reduce the chance that a rider will be bumped off a tractor, but it can't eliminate the risk. The small measure of protection from an enclosed cab is not a guarantee of safety for extra riders. Door latches may not be fully latched; latches can be bumped; and children can become restless and tamper with latches and controls. Note: Tractor models with Instructional seats are limited to cab tractors.

Causes of Runovers

There are many reasons why extra riders are thrown from the tractor, usually resulting in death. The causes include:

- Sudden stops
- Driving over holes, stumps and debris; or
- A sharp turn causes the extra rider to lose his or her footing or to be tossed off the tractor. The tractor does not have to overturn for an extra rider to be thrown from the vehicle.

Operators may think they can respond and stop the tractor in an instant, especially if the tractor is moving very slowly or if only simple tasks are being performed. The most common comment from people involved in tractor runovers is how quickly they happen. See Table 1.

Runovers can also occur when the tractor is involved in an incident. One common scene occurs when a rider is thrown after the tractor hits a building, bridge, or another vehicle. If the tractor overturns, the operator and the rider are both in danger.

The "No Riders" Rule

The only way to prevent extra rider injuries or deaths is to prohibit riders on tractors except for those actually involved in training on a tractor equipped with an instructional seat. Consider making a permanent policy to never allow riders on tractors.

This may be a difficult rule to follow, especially in situations involving visitors or young children. Depending upon the age of the child, it may be helpful to explain what can happen to tractor riders.

Solutions

Children may understand that they aren't allowed to ride other heavy equipment such as road graders or machines used for construction. They also may enjoy a ride on other farm vehicles designed for passengers such as farm trucks. A chance to sit in the operator's seat while the engine is turned off and the key is removed also may satisfy a child's curiosity about tractors.

Make sure all tractor operators observe the "NO RIDERS" rule. Discuss its importance with your managers and employees. It's also helpful to post "NO RIDERS" decals on all tractors to remind others about the policy.

The most effective way to observe the "No Riders" rule is to eliminate the need for extra riders on tractors. Use other vehicles, such as trucks or cars, when you need to transport workers to fields or distant work sites.

Limit the use of the extra seat for instructional or other limited use circumstances.

Problems on Other Equipment

Other equipment may be unsafe for extra riders, too. Most all-terrain vehicles, skid steer loaders, and riding lawnmowers are designed for one person.

Some combines and other equipment have extra seats. Seats for extra riders should be added only by the manufacturer because many factors are considered in designing them for safety. A makeshift seat added to farm equipment cannot ensure safety.

Enforcing a "NO RIDERS" rule may be the single most important thing you can do to protect people on your farm or ranch. The rule may challenge years of tradition, but it provides a safer way to pass on your agricultural heritage.

What Can You Do?

A "NO RIDERS" rule for all tractors at all times may be the single best way you can assure the safety of others in your operation. Here are some tips:

- Discuss with managers and employees why a "NO RIDERS" rule is important.
- Apply "NO RIDERS" decals on all tractors and other farm equipment. (See figure 1 below.)
- Make sure all guests and hosts know your opinion about extra riders.
- Use a truck or car to haul passengers to fields or distant work areas.



Figure 1. "No Riders" decal.

How Much Do You Know?

1. An enclosed cab offers adequate protection for extra riders. True or False?
2. You only have to worry about extra riders who are children because adults can protect themselves on a tractor. True or False?
3. The following types of farm equipment are unsafe for extra riders.
 - a. tractor
 - b. all-terrain vehicle
 - c. pick-up truck cab
 - d. combine

Answers are at the end of the publication.

Case Report

An example and detailed analysis of the death of an extra rider are provided in the following report:

"Youth Riding as Passenger on Tractor Killed by Overturn." Case Report No.: 01KY062, Report Date: May 22, 2002. Fatality Assessment and Control Evaluation (FACE) Project, Kentucky Injury Prevention and Research Center, Lexington, KY.

<
www.cdc.gov/niosh/face/stateface/ky/01ky062.html>.

Note: The victim was a 16-year-old with plenty of experience on the farm. She was riding on the fender of a tractor without a ROPS when the rear wheel ran over a hay bale. The tractor overturned, throwing the driver clear, but pinning the extra rider.

For More Information

"No Riders" decals may be purchased from the Farm Safety 4 Just Kids organization. Call (515) 758-2827.

For more information about tractor safety, visit the Florida AgSafe Web site: <www.flagsafe.ufl.edu>; or the National Agricultural Safety Database (NASD): <www.cdc.gov/nasd>.

This publication is a part of the Safer Tractor Operator series. A complete list of publications in this series is given below. All are available at your county Extension office, at the EDIS Web site, <<http://edis.ifas.ufl.edu>>, and at the Florida AgSafe Web site.

- Safer Tractor Operations: Introduction <<http://edis.ifas.ufl.edu/AE241>>
- Getting Started on the Right Foot: Dangers of Bypass Starting <<http://edis.ifas.ufl.edu/AE173>>
- Filling Gas Cans Safely <<http://edis.ifas.ufl.edu/AE174>>
- Lighting and Marking Farm Equipment for Road Travel -- Summary of ASAE Standard S279.10 <<http://edis.ifas.ufl.edu/AE175>>

- Road Safety for Tractors
<<http://edis.ifas.ufl.edu/AE176>>
 - Frequently Asked Questions (FAQs) about Rollover Protective Structures (ROPS)
<<http://edis.ifas.ufl.edu/AE177>>
 - Avoid the Invisible Hazard: Know About Soil Shear Lines (ABE305)<<http://edis.ifas.ufl.edu/AE178>>
 - Shortcuts Are Shortsighted! or Invest Seconds, Save Lives <<http://edis.ifas.ufl.edu/AE179>>
 - Ready or Not? Get Ready with a Tractor Operator Checklist
<<http://edis.ifas.ufl.edu/AE180>>
 - Yee-Haa! Formula for a Successful Tractor Rodeo <<http://edis.ifas.ufl.edu/AE181>>
 - Hand-me-down Hazards: Dangers of Used Equipment <<http://edis.ifas.ufl.edu/AE182>>
 - Safety Tips for Tractor Loading and Towing
<<http://edis.ifas.ufl.edu/AE183>>
 - Safer Tractor Operations for Agricultural Employers <<http://edis.ifas.ufl.edu/AE195>>
 - Safer Tractor Operations for Privately Owned and Operated Farms and Ranches
<<http://edis.ifas.ufl.edu/AE196>>
 - Safer Tractor Operations for Acreages and Homeowners <<http://edis.ifas.ufl.edu/AE197>>
 - Safer Tractor Operations for Landscape Maintenance and Horticultural Industries
<<http://edis.ifas.ufl.edu/AE198>>
 - Safer Tractor Operations for Emergency and Rescue Personnel
<<http://edis.ifas.ufl.edu/AE199>>
 - Safer Tractor Operations for Farm Workers and Employees <<http://edis.ifas.ufl.edu/AE200>>
- Quiz Answers: 1. False. 2. False. 3. a, b, and d.

Table 1. No matter how slow you are driving, you cannot stop a tractor before it rolls over a thrown rider.

Tractor speed (miles per hour)	How fast the tractor covers 6 feet (seconds)	Stopping time (seconds)	Stopping distance (feet)
5	0.82	1.6	12
10	0.41	3.2	30
15	0.27	4.8	48
20	0.20	6.4	64
25	0.16	8.0	84
30	0.14	9.6	111