



Maine Farm Safety Program

by Dawna L. Cyr, farm safety project assistant, and Steven B. Johnson, Ph.D., Extension crops specialist

Tractor and PTO Accidents and Rescues

Most rescuers are not familiar with farm equipment such as tractors, or a power take off (PTO). Farmers may need to help rescuers when an accident involving these types of machines takes place. Further accidents may occur if the proper rescue techniques are not used. Every adult or teenager on the farm should be familiar with the machinery so that it can be stopped or shut down.

Be prepared for possible farm accidents with a procedure to contact the rescue unit and to get assistance or first aid. Have a family or farm meeting periodically to discuss the procedure or plan.

Tractor Rollovers

Victims of tractor overturns usually suffer crushing injuries to the head, chest and pelvic areas. Movement may aggravate injuries and cause extensive internal bleeding. In many cases, it is

best to transport the victim in the same position as found.

Emergency medical and rescue personnel should be summoned to deal with tractor accidents. Overturns can result in fatalities. At best, entrapment and serious injury are likely to be encountered. Always approach the victim from the uphill side if the overturn has occurred on a slope. This will keep the tractor from falling on the rescuer.

PTO Entanglement

PTO entanglements cause extensive damage to trapped limbs and sometimes require limb amputation. Use caution if

Tractor and PTO Accidents and Rescues

- **Be prepared and able to assist in PTO and tractor accidents.**
- **Use the right tractor for the right job.**

disengaging the PTO. It can cause additional movement or injury to the victim. Cut away clothing, if necessary, to allow the victim to breathe easier. Do this with caution to prevent the victim

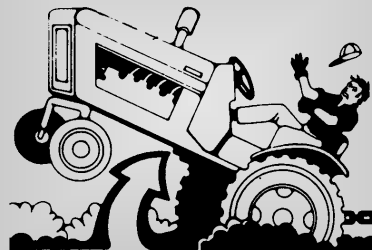
from moving. Any movement may allow a severed limb to fall free and may aggravate internal and spinal injuries or cause severe blood loss.

Here is a list of key points to consider when attempting a tractor rollover rescue.

- 1** Fire is a threat in an overturn situation if there is spilled fuel present. A fire hose or ABC-type extinguisher should be available throughout the rescue. Consider alternative methods before using oxyacetylene cutting equipment to free a victim.
- 2** Shut off the tractor engine. Even if it isn't running, rear wheel movement could start it up.
- 3** If the ground is soft, it may be possible to dig the victim out from under the tractor. Always block or crib the machine to prevent it from tipping and causing more injuries.
- 4** Lifting the tractor is the best way to deal with rollovers of large, modern tractors. A second tractor or a tow truck will be needed to perform the lift. If a tractor must be rolled away from the victim, careful blocking is required to minimize settling of the lower side.
- 5** Place cribbing under the tractor as it is raised. Non-essential rescuers should stand well clear to avoid injury if the cable or chain breaks.
- 6** Hydraulic jacks can be used to lift smaller tractors. Block the axle on both sides to prevent the tractor from rocking onto the victim.
- 7** Air bags can be used to raise an overturned tractor. They are more stable if stacked alternately with the blocking.
- 8** If a victim is pinned under one side of a small tractor, eight to ten people may be able to roll the machine enough to free the victim.

Steps to Free a PTO Accident Victim

- 1** Block the implement to ensure firm support throughout the rescue.
- 2** Attempt to telescope the two ends of the PTO shaft apart. It may be necessary to roll the tractor ahead to slide the stub shaft out of the front yoke, or to separate the shaft.
- 3** Single-piece PTO shafts may have to be cut or disassembled at either end to free the victim.
- 4** It may be possible to free the victim by turning the shaft backward. Under no circumstances should tractor power be used to rotate the shaft!
- 5** Sometimes, it is best to transport a stabilized victim still entangled with part of the PTO shaft. Extrication can be completed by a surgeon under hospital conditions.
- 6** All amputated tissue should be transported to the hospital with the victim.
- 7** Spine and neck injuries are common in PTO entanglements. Appropriate stabilization procedures must be followed.
- 8** If the accident involves complex or unfamiliar equipment, seek advice from a local implement dealer. This may prove to be faster and more efficient than the trial and error approach.



Following the proper rescue techniques can help prevent further injuries. Care must be taken so that the rescuers are not injured as well.

This Maine Farm Safety fact sheet is part of an educational fact sheet series produced by University of Maine Cooperative Extension. For more information on farm safety, contact your county Extension office.

Information in this publication is provided purely for educational purposes. No responsibility is assumed for any problems associated with the use of products or services mentioned. No endorsement of products or companies is intended, nor is criticism of unnamed products or companies implied.

© 2003, 2020

Call 800.287.0274 (in Maine), or 207.581.3188, for information on publications and program offerings from University of Maine Cooperative Extension, or visit extension.umaine.edu.

The University of Maine is an EEO/AA employer, and does not discriminate on the grounds of race, color, religion, sex, sexual orientation, transgender status, gender expression, national origin, citizenship status, age, disability, genetic information or veteran's status in employment, education, and all other programs and activities. The following person has been designated to handle inquiries regarding non-discrimination policies: Director of Equal Opportunity, 101 North Stevens Hall, University of Maine, Orono, ME 04469-5754, 207.581.1226, TTY 711 (Maine Relay System).