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## OCCUPATIONAL SAFETY OF OPERATORS WORKING ON TRACTORS

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Tractors are a primary source of work-related injury on farms, however, not all of the injuries happen while the tractor is being used for work. Nationally, nearly one-third of all farm work fatalities are tractor-related. Injuries occur for a variety of reasons and in a number of different ways. This task sheet will describe types of tractor hazards and the nature and severity of injuries associated with using farm tractors.

There are several hazards associated with tractor operation. Tractor hazards are grouped into the following four categories:

1. overturns;
2. runovers;
3. power take-off entanglements;
4. older tractors.

Each of these is discussed briefly in this task sheet. Other task sheets will cover some of these topics in more detail.

Tractor overturns is one major hazard group and accounts for the most farm-work fatalities. Approximately 50% of tractor fatalities come from tractors turning over either sideways or backward. There are dozens of examples of tractor turnover situations. Most are preventable if operators follow good safe tractor operation practices. Some common examples of tractor overturns include:

- turning or driving too close to the edge of a bank or ditch;
- driving too fast on rough roads and lanes and running or bouncing off the road or lane;
- hitching somewhere other than the drawbar when pulling or towing objects;
- driving a tractor straight up a slope that is too steep;
- turning a tractor sharply with a front-end loader raised high.

A rollover protective structure (ROPS), a structural steel cage designed to surround the operator – particularly one that is built into an enclosed cab – can protect the operator from being killed when a tractor overturns.

This is especially true if the operator has fastened the seat belt. Remember, though, that a ROPS can protect you from injury but cannot keep the tractor from overturning in the first place. This explains the importance of operating a tractor safely even if the tractor has a ROPS.

Older tractors should always be included when talking about tractor hazards. Many farm tractors still used for work may be 30 to 40 years old or older.

These older tractors are often less safe to operate because they do not have modern safety features, and because some parts of the older tractor may not have been maintained in good working condition.

A list of reasons why older tractors may be less safe to operate includes:

- lack of ROPS and seat belt;
- a seat without arm and back rests (pan seat);
- seat does not adjust easily or at all;
- absence of a safety start system, no bypass starting protection;
- rear brakes and brake pedals do not operate properly;
- front wheels do not turn as quickly as the steering wheel turns;
- tractor has no warning flashers or the flashers do not work;
- PTO master shield is missing or does not offer adequate protection.

Young and inexperienced workers may be given older tractors to operate in many cases. The older tractor is best suited for the types of jobs a young or inexperienced operator is hired to do.

These tractors are best suited for raking hay, hauling wagons, and mowing fields or pastures. Young and inexperienced operators should be given newer tractors to operate when possible.

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