

DATE: March 30, 1998

FROM: Minnesota Fatality Assessment and Control Evaluation (MN FACE) Program
Minnesota Department of Health

SUBJECT: MN FACE Investigation 98MN01801
Farmer Dies After Tractor He Was Driving Rolled Over On Him

SUMMARY

A 71-year-old farmer (victim) died of injuries he sustained when the tractor he was driving overturned. On the day of the incident, the victim was driving a farm tractor that was pulling an empty gravity flow wagon on a gravel surfaced public road. The tractor was approximately 10 years old and was equipped with an enclosed rollover-protective cab and a seat belt. However, at the time of the incident, the victim was not wearing the seat belt. While the victim drove east on the road, the right wheels of the tractor gradually left the surface of the road. The right side wheels entered a ditch on the south side of the road and the tractor overturned into a culvert. A resident of the area was driving west on the road and noticed the tractor lying on its side. He immediately returned to his residence and placed a call to emergency rescue personnel. They arrived at the scene shortly after being notified and pronounced the victim dead at the scene. MN FACE investigators concluded that to reduce the likelihood of similar occurrences, the following guidelines should be followed:

- operators of tractors equipped with ROPS and a seat belt should always use the seat belt.; and
- operators of tractors should maintain safe operating speeds at all times.

INTRODUCTION

On March 19, 1998, MN FACE investigators were notified of a farm work-related fatality that occurred on October 27, 1997. The county sheriff's department was contacted and releasable information obtained. Information obtained included a copy of their report of the incident and copies of their photos of the incident site. A site investigation was not conducted by MN FACE investigators.

During MN FACE investigations, incident information is obtained from a variety of sources such as law enforcement agencies, county coroners and medical examiners, employers, coworkers and family members.

INVESTIGATION

On the day of the incident, the victim was driving a farm tractor that was pulling an empty gravity flow wagon on a gravel surfaced public road. The tractor was approximately 12-15 years old and was equipped with an enclosed rollover-protective cab and a seat belt. It had a wide front wheel configuration and did not have dual wheels on either rear axle. The tractor was capable of traveling at a maximum speed of approximately 16-18 miles per hour. Since the incident was not witnessed, the approximate speed of the tractor at the time of the rollover was not known.

The incident occurred at approximately 7:00 a.m. on a clear morning. The victim was driving east, looking directly toward the rising sun. While the victim drove on the road, the right wheels of the tractor gradually left the surface of the road. Tire tracks indicated that the right side wheels started to leave the roadway approximately 70 feet prior to the rollover site. The tracks also indicated that the tractor was almost entirely in the ditch before it rolled into a culvert and onto its side. Although the tractor was equipped with an enclosed rollover-protective cab, the victim did not appear to have been wearing a seat belt and he was partially thrown from and pinned under the front part of the cab.

A resident of the area was driving west on the road and noticed the tractor lying on its side. He immediately returned to his residence, approximately three-fourths of a mile from the incident site, and placed a call to emergency rescue personnel. They arrived at the scene shortly after being notified and pronounced the victim dead at the scene.

CAUSE OF DEATH

The cause of death listed on the death certificate was multiple visceral and skeletal injuries.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Operators of tractors equipped with ROPS and a seat belt should always use the seat belt.

Discussion: Preventing death and serious injury to tractor operators during tractor rollovers requires the use of a rollover protective structure and a seat belt. These structures, either a roll-bar frame or an enclosed roll-protective cab, are designed to withstand the dynamic forces acting on them during a rollover. In addition, seat belt use is necessary to ensure that the operator remains within the "zone of protection" provided by the rollover protective structure. In this incident, the operator was not wearing the seat belt and he was partially thrown through a cab window and crushed by the front of the tractor. If he had been wearing the seat belt he may have remained in the seat, and been protected by the cab, and this fatality may have been prevented.

Recommendation #2: Operators of tractors should maintain safe operating speeds at all times.

Discussion: Tractors should always be driven at speeds which allow the operator to maintain complete control of the tractor. Operators need to maintain control at all times to avoid all types of accidents including rollovers. This requires that the tractor speed be kept slow enough to allow the operator to safely react to unexpected situations and hazards. Although the tractor's speed at the time was unknown, the combination of it's speed and the operator looking directly at the rising sun may have contributed to the tractor leaving the roadway. If the tractor had been travelling at a slower speed, the operator may have had time to react and avoid the rollover by steering the tractor back onto the road. Safe operating speeds may vary slightly between operators because of such factors as the operator's age, years of experience, and familiarity with the specific tractor or farm machine being operated. Farm youths should maintain slower operating speeds because of their overall lack of

experience with all types of motorized vehicles.

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