

DATE: October 10, 1997

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

SUBJECT: MN FACE Investigation 97MN024
Farmer Dies After Tractor He was Driving Rolled Over on Him

SUMMARY

A 67-year-old farmer (victim) died of injuries he sustained when the tractor he was using to plow a grass field overturned. The tractor was not equipped with a rollover protective structure and a seat belt. The east end of the field was adjacent to a county road ditch. The victim had nearly completed plowing the field and it appeared that he was making the last few trips across the field plowing only from the east end of it to the west end. After reaching the west end he drove the tractor on the farm driveway back to the east end. After reaching the east end of the field, he was unable to make a sharp 180 degree left turn and enter the open furrow to again plow across the field. Since he was unable to make the sharp left turn, after turning left from the driveway (90 degrees) and entering the field he drove past the open furrow and made a circular turn to the right to enter the open furrow. While making this circular turn the left wheels of the tractor entered the road ditch and the tractor overturned. A passing motorist discovered the overturned tractor and drove to a nearby farm where a call was made to emergency medical personnel. They arrived at the scene shortly after being notified. The farmer from whose place the emergency call was made also arrived at the scene with a tractor to assist in freeing the victim. Shortly after the victim was freed, emergency personnel 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:

- all tractors should be equipped with a rollover protective structure and a seat belt.

INTRODUCTION

On June 24, 1997, MN FACE investigators were notified of a farm work-related fatality that occurred on June 21, 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 used a farm tractor to plow a grass field along the north side of his farm driveway. The east end of the field was adjacent to the ditch of a local county road. The tractor was approximately 40 years old and was not equipped with a rollover protective structure and a seat belt. It had a wide front wheel configuration and did not have dual wheels on either rear axle.

The victim had nearly completed plowing the field, including a narrow strip that had been plowed across the east end of the field. It appeared to rescue personnel that he was making the last few trips across the field plowing only from the east end to the west end of the field. After reaching the west end the victim turned and drove the tractor on the farm driveway back to the east end. After reaching the east end of the field, it appeared that he was unable to make a sharp 180 degree left turn and enter the open furrow to again plow across the field. Since he was unable to make the sharp left turn, after turning left from the driveway (90 degrees) and entering the field he drove past the open furrow and made a 360 degree circular turn to the right to enter the open furrow. While making this circular turn on the end of the field, the left wheels of the tractor entered the road ditch. The tractor and plow overturned to the left and came to rest upside down. The victim was crushed beneath the tractor at the bottom of the road ditch.

A passing motorist discovered the overturned tractor and drove to a nearby farm where a call was made to emergency medical personnel. They arrived at the scene shortly after being notified. The farmer from whose place the emergency call was made also arrived at the scene with a tractor to assist in freeing the victim. Shortly after the victim was freed, emergency personnel pronounced the victim dead at the scene.

CAUSE OF DEATH

The cause of death listed on the death certificate was not available when this report was completed.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: All tractors should be equipped with a rollover protective structure and a 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. Government regulations require that all tractors built after October 25, 1976, and used by employees of a farm owner must be equipped with a rollover protective structure and a seat belt. Many older tractors are in use on family farms and do not have nor are they required by government regulation to have such structures to protect operators in case of a rollover. However, from a safety perspective all older tractors should be fitted with a properly designed, manufactured, and installed rollover protective structure and seat belt. If the tractor involved in this incident had been fitted with a rollover protective structure and a seat belt, and the seat belt had been in use, this fatality might have been prevented.

REFERENCES

1. Office of the Federal Register: Code of Federal Regulations, Labor, 29 CFR Part 1928.51 (b), U.S. Department of Labor, Occupational Safety and Health Administration, Washington, D.C., April 25, 1975.

George Wahl, M.S.
Senior Safety Investigator
MN FACE

David L. Parker, M.D., M.P.H.
Principal Investigator
MN FACE

GW/DLP/DB/ey