

DATE: December 18, 1992

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

SUBJECT: MN FACE Investigation MN9217
Farmer Dies After Falling From the Tongue of a Moving Hay Wagon

SUMMARY

A 23-year-old male farmer (victim) died from injuries he received after falling from the tongue of a moving hay wagon. The wagon, loaded with straw bales, was being pulled by a small utility tractor down a paved county road. Two young helpers, one driving the tractor and one riding on top of the straw, accompanied him but neither witnessed the incident. The victim was standing on the tongue of the wagon where it attached to the draw bar of the tractor. It measured 17 inches off the ground. The workers proceeded on the road in high gear with the throttle completely open; their speed was approximately 17 miles per hour (mph). The victim slipped or lost his balance and fell off the wagon tongue. At least one wagon wheel ran over his body. It was not determined if the head injuries which caused his death resulted from hitting his head on the pavement or from being hit by a wagon wheel. MN FACE investigators concluded that, in order to prevent similar occurrences, the following guideline should be followed:

- > Farm workers should not ride on farm equipment unless safe riding or seating facilities are provided. Where safe riding facilities are not available, farm workers should be transported by separate vehicles.

INTRODUCTION

On September 11, 1992, MN FACE was notified of a work-related agricultural fall incident by Minnesota Department of Health's Health Promotion and Education personnel. The date of occurrence was August 11, 1992. A site investigation, including equipment inspection and interview with the victim's father, was conducted on October 7, 1992. County sheriff and coroner reports were requested.

The victim had worked on his father's dairy farm his whole life and gained on-the-job training during this time. The work being performed on the day of the incident was typical of his duties. Riding on the wagon's tongue was not, however, standard operating procedure; this behavior had been strongly discouraged in the past. The victim had attended college for two years and

majored in an agriculture-related field. The victim's father believed that he had attended agriculture-related safety classes during this time.

INVESTIGATION

The incident took place in the afternoon; the weather was clear and dry as was the roadway, and was probably not a factor in this incident. It occurred in the straight part of a long S-curve in the road; there were no evident road conditions, which contributed to this fatality.

Three farm workers were hauling a hay wagon loaded with straw bales down a paved county road. A small 70 horse power utility tractor was being used to pull the wagon. The wagon held approximately 140 bales of straw, each weighing about 40 pounds. The tractor was in high gear with the throttle fully open as they proceeded down the road. Their speed was approximately 17 mph.

The victim was standing on the tongue of the wagon, between the tractor and wagon, at the time of the incident. The wagon tongue was attached to the draw bar of the tractor which was 17 inches off the ground. The width of the tongue where the victim was standing was approximately 4 inches. He was probably holding onto a tractor fender or the front of the hay wagon for support before falling from the wagon tongue.

A young helper was driving the tractor and another was riding on top of the straw bales in the wagon. They had proceeded approximately 1.5 - 2 miles from the haying field. Neither the tractor driver, who was looking straight ahead, nor the wagon rider saw the victim fall. It is hypothesized, however, that the victim may have slipped or lost his balance when he attempted to reach down and grab his cap which had blown off earlier. A helper also mentioned that the victim tossed a pair of shoes to the top of the straw bales at some point, but was unsure if this was when he fell. In any event, he lost his balance or grip and fell onto the pavement.

Both the tractor driver and wagon rider felt a single bump. The wagon rider looked back, saw the victim in the road, and shouted for the tractor driver to stop. The young helpers ran back to assist their co-worker. An approaching motorist stopped at the same time, instructed the helpers to run to a residence and call 911, and attempted to aid the victim.

The victim was dead on the scene when an ambulance crew arrived shortly afterwards and resuscitation was not attempted. According to the sheriff's report, it appeared that the victim had been run over by at least one of the wagon wheels. It was not determined whether the head

injuries causing his death resulted from falling and hitting his head on the pavement, or from having a wagon wheel hit it.

CAUSE OF DEATH

The cause of death stated in the coroner's report was "a rather massive skull fracture with hemorrhaging." The victim also had extensive chest, abdominal, and back injuries.

RECOMMENDATION/DISCUSSION

Recommendation #1: Farm workers should not ride on farm equipment unless safe riding or seating facilities are provided. Where safe riding facilities are not available, farm workers should be transported by separate vehicles.

Discussion: Except for the tractor seat, there were not safe riding positions for workers in this situation. It is possible for workers to slip, lose their balance or grip, or be shaken or jolted off when riding on moving farm equipment. This work practice becomes even more dangerous, as in this case, when balance must be maintained on a narrow ledge (the wagon tongue) between the tractor and a heavy wagon. In addition to the fall hazard, the worker is exposed to the risk of being run over. Though not related to this incident, riding on top of a loaded hay wagon is a hazardous practice as well. A fall, or a crushing in the event of a rollover, is always possible.

Because of these problems, a vehicle for transporting workers to and from distant sites may be necessary. In many situations, coordinating the availability of such a vehicle should not be difficult. The victim in this incident, who possessed a driver's license, could have safely driven himself and one helper to and from the straw field in a car or truck. The other helper was still free to drive the tractor and wagon back and forth.