

Fatality Assessment and Control Evaluation Project

Public Health

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TO: Carl Spurlock, PhD, Director, Kentucky Injury Prevention and Research Center, and Epidemiologist, Kentucky Department for Health Services

FROM: Amy Scheerer, Field Investigator, Kentucky Fatality Assessment and Control Evaluation (KY FACE) Project, and Joan Muehlbauer, RN, Community Partners for Healthy Farming (CPHF) Project

SUBJECT: Farmer Dies When Caught Beneath Overturned Tractor

SUMMARY

A 68-year-old male farmer was killed when the tractor he was operating overturned and pinned him underneath. He had been plowing in preparation for corn planting and apparently was on his way to check on the cattle after finishing in the field. As he traveled down a hillside on the tractor with the plow attached, he turned the vehicle sharply to the right causing the tractor overturn. The Allis Chalmers 190 tractor was not equipped with a Rollover Protective Structure (ROPS) or seatbelt. As the tractor overturned, the victim fell off and was pinned under the right rear wheel. He remained there for 3-4 hours until the tenants who live on his land came home and found him about 6 pm. Although the victim's lower abdomen and legs were pinned by the rear wheel, he was still alive and able to speak. 911 was called and rescue squads arrived within 10 minutes. Using a wrecker and cable, rescue personnel were able to lift the tractor up enough to pull the victim from beneath the wheel. The victim was transferred to a 4-wheel drive vehicle and taken to the top of the hill to the waiting ambulance. The ambulance arrived at the local hospital at 7:16 pm and he was immediately transferred by helicopter to a higher level trauma hospital; however, he had suffered severe injuries and died later that evening. In order to prevent similar incidents from occurring, FACE investigators recommend that:

- Tractors should be equipped with Rollover Protective Structure (ROPS) and seatbelts.
- Equipment should be kept in good working condition.

INTRODUCTION

On March 2, 1998, FACE was informed of a 68-year-old farmer who was killed on February 27, 1998. Investigators traveled to the scene on April 10, 1998. The victim's son was interviewed and he accompanied investigators to where the incident occurred on the farm property. Photographs and measurements were taken of the scene and equipment. The sheriff and EMS personnel who were present at the scene were interviewed via telephone. Copies of the sheriff's report, coroner's report, and death certificate were obtained.

The victim in this case had been in the construction business for 27 years and retired at age 62. He purchased 183 acres of farm land in 1986 and began farming it about 5 years later when he retired from construction work. Most recently he raised tobacco, cattle, and corn on the farm, but in prior years he also had horses and pigs. He had been involved with the family farm while growing up and was familiar with the equipment and procedures.

The victim had a history of high blood pressure and had been taking medication for several years. While working on his home in January, he had fallen and cracked one rib and bruised others. In the days prior to the incident, he had complained to his son that his health was not as good as it used to be. He was accustomed to working long hours on both the farm and his house and was frustrated by these recent health limitations.

INVESTIGATION

On the day of the incident the weather was fairly clear, but there had been a light rain early in the morning which left the ground moist. In preparation for planting corn, the victim plowed 7 acres of the farmland using one of the two Allis Chalmers tractors that he had purchased since buying the farm several years ago. The tractor was a model 190, manufactured between 1964 and 1972. It was not equipped with a Rollover Protective Structure (ROPS) or seatbelt and the tires had little traction and were in poor condition. The vehicle weighed approximately 9,000 lbs and had a 65 hp engine. The width across the rear wheels of the tractor measured 80 inches; width across the front wheels measured 74 inches.

After finishing the plowing between 2-3 pm, the victim drove the tractor with the plow attached to check on the cattle. He had put down a section of the fence that surrounded the cattle area so he could drive the tractor over it. The fence line ran along the top of a hillside and the land sloped down about 100 yards toward a creek which had to be crossed to get to the barn where the equipment is stored. The hillside had a slope of approximately 30 degrees. Tire tracks in the grass indicated about two-thirds of the way down the hillside he turned the tractor to the right to head toward the shallow area of the creek. As he made the turn on the steep hill, the tires slipped on the damp grass and the tractor rolled over to the left and landed on its right side. The victim fell off during the roll and was pinned underneath the right rear wheel of the tractor. At about 6 pm, a couple that rent a house on the farm came home from work. When the wife looked out the window of the house facing the hillside, she noticed the tractor lying on the hill and a dog near the tractor. She told her husband and he went out to check. When he realized the victim was pinned underneath, he ran back to tell his wife to call 911 for help. When the husband returned to the victim, he found him pinned under the rear wheel from the waist down. The victim was alive and able to speak; he knew he had been pinned there for at least 3 hours.

Rescue personnel were dispatched after receiving the 911 call at 6:03 pm and arrived within 10 minutes. The ambulance could not get to the victim because the hillside was steep and the ground was too soft, but a few 4-wheel-drive vehicles, including a wrecker and pick-up truck, were able to get to the scene. Rescue personnel were able to lift the tractor up a few inches by attaching a cable from the wrecker to the tractor. The victim was pulled from beneath the tractor and taken to the waiting ambulance in a pick-up truck. The ambulance left the scene at 6:56 pm and arrived at the local hospital at 7:16 pm; the victim was then transferred by helicopter to a higher level trauma hospital. However, the victim's injuries were severe and he died that evening at 9:10 pm.

CAUSE OF DEATH

The cause of death on the death certificate was listed as exsanguinating hemorrhage due to blunt force injury to the pelvis due to motor vehicle accident/tractor rollover.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Older tractors should be retrofitted with a Rollover Protective Structure (ROPS) and seatbelts.

Discussion: A Rollover Protective Structure (ROPS) is designed to protect the tractor operator in the event of a turnover. A ROPS is only effective when used with a seatbelt which ensures that the operator stays in the protected zone of the ROPS. A ROPS kit is available to retrofit the Allis Chalmers 190 tractor in this case for approximately \$1400, plus shipping and installation charges.

Recommendation #2: Equipment should be kept in good working condition.

Discussion: The tractor in this case had tires that were in poor condition and provided little traction. Replacing worn tires and keeping the equipment in good condition can increase the performance ability of the vehicle and reduce the risk of the operator being injured. In this case, proper tires could have decreased the risk of the tractor slipping on the hill and subsequently rolling over.

References

Official Guide to Tractors and Farm Equipment. St. Louis, MO: North American Equipment Dealers Association; 1994.

During 1994-1997, 53 farmers were killed in tractor overturns in Kentucky. It is likely that all of these farmers would have survived if they had been operating tractors equipped with a rollover protective structure (ROPS) and wearing a seatbelt. Most older tractors can be retrofitted with a ROPS and seatbelt. Contact your local farm equipment dealer or KY FACE (1800-204-3223 or 606-257-4955) for details on ordering a ROPS kit for your tractor.