

Date: 28 September 1994

Subject: Farmer Killed When Tractor Overturns

SUMMARY

A 68-year-old male farmer was killed when the tractor he was operating overturned. The victim was driving his tractor down the roadway to a farm near his home. He was hired to bush hog on a neighbor's property. The tractor was not equipped with a Roll Over Protective Structure (ROPS) or a seat belt. The tractor did have indicator lights mounted to the fenders but no Slow Moving Vehicle (SMV) emblem. The tractor was towing a bush hog mounted on a three point hitch. The victim drove eastward on a public roadway to reach the property. Turning right from the roadway to a private drive he lost control of the tractor. The left front wheel went over an embankment, causing the tractor to roll over and come to rest on the victim. A witness called the Emergency Medical Service (EMS). The county coroner arrived later to pronounce the victim dead.

In order to prevent future fatalities of this type the FACE investigator recommends:

- Tractors should be retro-fitted with Roll Over Protective Structures (ROPS) and seat belts.

Additionally, county officials should initiate 911 emergency response service

INTRODUCTION

On September 1, 1994, a 68-year-old part-time farmer was killed when the tractor he was operating overturned. On September 2, 1994, the FACE investigator read of the incident in the newspaper. An investigation was immediately initiated. On September 22, 1994, the state FACE investigator traveled to the scene. The county coroner, EMS personnel, the county sheriff, and the victim's brother were interviewed. An eyewitness was not available the day of the site visit. The sheriff's report and the coroner's report and notes were obtained. An equipment dealer familiar with the tractor was interviewed by phone. Photographs and report were obtained from the sheriff. Photographs and measurements of the scene and tractor were taken.

Previous training information from the victim's prior employment was obtained.

The victim had retired from the state highway department six years prior to the incident. Part of his responsibilities for the highway department included roadside maintenance. He had over 19 years' experience with the road department and about 10 years mowing along highways. Prior to and since his retirement, he had lived on a 70 acre farm with his brother and sister. The 3800 pound tobacco base had been leased out for a number of years. The victim mowed and did other odd jobs for the surrounding farmers. The victim had attended several safety meetings while working for the highway department. Topics covered chemical application, general safety, and first aid. Injury history was not available.

INVESTIGATION

About 10:00 am on September 1, 1994, a 68-year-old farmer was crushed after the tractor he was operating turned over. The victim was driving a 1969 Massey Ferguson 135 tractor with a bush hog attachment on a public roadway. He had been hired to mow a field about one quarter mile from his home. As he turned from the roadway to a private drive, making a sharp right turn, the left front wheel went over an embankment. The momentum caused the tractor to continue down the bank and overturn, pinning the victim beneath the tractor. The victim's head was under the right tire and the hood of the tractor rested on his leg. It is not known if the victim tried to jump.

The witness, who had hired the victim to do some mowing, went to the victim, saw he needed help and called the rescue squad. EMS received the call at 10:20 am. Two EMT's arrived at the scene at 10:33. The sheriff arrived at the same time. The rescue squad arrived a few minutes later. The coroner arrived at 10:59. Air blocks set under the tractor and a winch on the front of the rescue van were used to free the victim. CPR was not initiated. The coroner pronounced the victim dead at 11:00. He was freed at 11:15 and taken to the funeral home.

The east/west 16 foot wide black top public road has a slight incline at the point where the private drive intersects. The drive enters the road at an acute angle and slopes downward 9 degrees. Its surface is loose gravel and its width is 10 feet. South of the drive was a 37 degree embankment which leveled out about 12 feet from the drive's edge. This slope was covered with weeds. The landing point of the tractor was grass. Next to the overturned tractor was a grapevine.

The tractor, a 1969 model (38 hp pto) was not equipped with a ROPS or a seat belt. There was no Slow Moving Vehicle (SMV) emblem or wheel weights. The hour meter read 2097 hours. The victim's brother stated the tractor was not used much on the farm. It suffered moderate damage in the rollover. The left tire was fluid filled to the recommended level but the right tire had less than half the recommended amount. Total weight was approximately 3800 pounds. Rear lights were mounted on the fenders. The three point hitch type Bush Hog model 305 (850 lb) was not damaged in the turnover.

CAUSE OF DEATH

The victim died of head and chest injuries. An autopsy was not done.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Tractor owners and operators should contact their county extension agent, local equipment dealer or equipment manufacturer to see if retro-fit rollover protection and operator restraint systems are available for this equipment.

Discussion #1: The tractor in this incident, manufactured in 1971, was not equipped with a ROPS or an operator restraint system, which protect the operator in the event of a roll over. ROPS first became available as optional equipment on farm tractors in 1971. These safety features were not required on tractors until 1976, when OSHA Standard 29CFR 1928.51 went into effect. This standard required employers to provide ROPS and safety belts for all employee-operated tractors manufactured after October 25, 1976. However, this standard does not apply to family farms or farms employing fewer than 11 persons. Since 1985, as a result of voluntary agreements by tractor manufacturers, all new tractors sold in the US have been equipped with ROPS and safety belts. (MMWR Jan.29, 1993) On this 1971 tractor, retro-fit ROPS and operator restraint systems are available. The cost is about \$1300.00 for the mounting kit, roll bar, and seat belt. Tractor owners

should contact dealers, manufacturers or county extension agents for information on sources of retro-fit ROPS and operator restraint systems.

Additionally, 911 service should be a countywide emergency response option. The Emergency Medical Services arrived at the scene quickly. The communication through two-way radio and telephone effectively notified personnel of the incident. However, 911 should be implemented countywide because it is recognized by the public as the number to call in the event of an emergency. County officials should initiate a county wide 911 emergency response system.

REFERENCES

Standard Number 1928.51 Subpart C US Department of Labor Occupational Safety and Health Administration, OSHA CD-ROM (OSHA A94-2) February 1994.

Public Health Focus: Effectiveness of Rollover Protective Structures for preventing injuries Associated with Agricultural Tractors. *MMWR* 42(03); 7-59, 1993.