

# Fatality Assessment and Control Evaluation Project

Public Health

KY FACE #98KY024

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

FROM: Ellyn Moon, MA, KY FACE Project Investigator

SUBJECT: Farmer Run Over by Tractor

## SUMMARY

An 80-year-old male farmer (the victim) died when he was run over by the right rear wheel of his tractor. He had backed the tractor to the door of a shed in order to hook a tiller to it. After parking the tractor on a slight incline in front of the shed, he left it in neutral while he went inside for the tiller. The parking brake did not hold, however, and the tractor began to roll. He apparently noticed this and tried to remount the tractor, but was knocked down by the wheel and run over. To prevent similar incidents, the KY FACE investigator recommends that:

- *tractor operators ensure that the tractor is in gear, with ignition turned off and parking brake completely engaged, before dismounting. These features should not be changed until the operator is back in the driver's seat with seatbelt fastened; and,*
- *if unattended equipment begins to move, workers should remain clear of its path of travel and not attempt to remount until it has come to a complete stop.*

## INTRODUCTION

On April 1, 1998, KY FACE was notified of the death of an 80-year-old farmer on March 30. An investigation was initiated through contact with the county coroner. On May 1, a KY FACE investigator travelled to the scene. The coroner was interviewed, and he shared documents and

photographs of the scene from his file. He had been a longtime friend of the victim and his family, and so was intimately familiar with the case.

The victim had been a farmer all his life. He was married, and had a son who lived on an adjoining farm. The victim's farm consisted of approximately 50 acres, and over the years he had leased additional acreage for raising tobacco. Although tobacco was the mainstay of the farm, he also occasionally raised some beef cattle. He was in good health for his age. Four years earlier he had fallen from the tobacco barn and received minor injuries, and just a year or so earlier he had a "close call" when he came into the drive too fast pulling a tobacco wagon behind his tractor. At the urging of his family, he had agreed to cut back on his farm work this year. He was planning to start some tobacco from seed and then sell the plants to others, rather than raising them himself.

The tractor was a Massey-Ferguson 245, manufactured about 1980. It had wide front wheels and partially fluid-filled rear tires. It was not equipped with a rollover protective structure (ROPS) or a seatbelt. It weighed approximately 4,000 pounds. The tractor was well maintained and in good condition.

## **INVESTIGATION**

The day of the incident was clear and cool. The victim had finished breaking the ground in his garden with a plow, and was ready to till it. He removed the plow attachment, drove the tractor to the shed, and backed it up toward the door. It was parked on a very slight incline. He turned the tractor off, but left it in neutral while he went to get the tiller. He set the parking brake, but only pushed it part of the way down. When he saw that the tractor had begun to roll forward, he went back and tried to remount and stop it, but he either fell or was knocked down by the right rear wheel, which was across his pelvic area when he was found.

The victim's nephew had borrowed some wrenches from him earlier that morning, and came back shortly after noon to return them. He happened to see the victim on the ground with the rear tractor wheel on him. The nephew mounted the tractor and backed it off the victim, then called emergency medical services (EMS) workers. They arrived at 1:30 pm, but could detect no signs of life. The coroner was called, and he arrived at 2:30 pm to pronounce the victim dead.

It was noted at the scene that the tractor's parking brake was only depressed about half as far as it should have been. The victim's son tested it later and determined that the brake would hold when completely depressed.

## **CAUSE OF DEATH**

The cause of death, as stated on the death certificate, was "blunt trauma injury to thorax and pelvis."

## **RECOMMENDATIONS/DISCUSSION**

**Recommendation #1:** *The tractor operator should ensure that the tractor is in gear, with ignition turned off and parking brake completely engaged, before dismounting. These features should not be changed until the operator is back in the driver's seat with seatbelt fastened.*

**Discussion:** *In this case, the ignition was appropriately turned off. However, the tractor was left in neutral, which would allow it to roll forward on the slight incline. In addition, the parking brake was only partially depressed, which was insufficient to hold the tractor in place.*

**Recommendation #2:** *If unattended equipment begins to move, workers should remain clear of its path of travel and not attempt to remount until it has come to a complete stop.*

**Discussion:** *Farmers or other workers should never attempt to mount a moving machine. In this case, the farmer's attempt to remount and stop the moving tractor resulted in tragedy. Because one can never be certain of successfully accomplishing such an attempt, it should be avoided altogether.*

#### *Endnote*

*Agricultural fatalities are a critical issue in the Commonwealth of Kentucky.<sup>1</sup> Contributing factors are complex. Perhaps most important, the mean farm income is less than \$14,000.<sup>2</sup> As a consequence many farms are unable to purchase new equipment and/or upgrade or maintain old equipment. Additionally, Kentucky's hilly terrain creates hazardous situations for farmers, increasing the need for ROPS- and seatbelt-equipped tractors. Also, it is not unusual for Kentucky farmers to continue farming into their 80s and 90s; operating tractors and other heavy equipment is a particularly hazardous activity for older persons. The same is true for adolescents, who often help out on farms by driving tractors, employment specifically prohibited by Child Labor Laws, although family farms are exempt. Moreover, economics is the compelling factor when farmers must work other, often full-time, jobs in order to make ends meet. This results in time constraints and higher levels of stress and fatigue. Compounding these problems, because farmers usually work alone most injury events are unwitnessed, making it less likely that victims will receive the immediate medical attention that could save their lives.*

<sup>1</sup>US Dept of Labor, Bureau of Labor Statistics, *Census of Fatal Occupational Injuries*, 1994.

<sup>2</sup>KY Department of Agriculture, unpublished data, 1997.