

# ***Fatality Assessment and Control Evaluation Project***

*Public Health*

*KY FACE #96KY07301*

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*To: Carl Spurlock, PhD, Director, Kentucky Injury Prevention  
and Research Center*

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*Subject: Farmer Killed When Crushed by Tractor*

## ***SUMMARY***

*A 70-year-old farmer (the victim) was killed while mowing his pasture. He had completed mowing around the top of a ridge, and was beginning to mow the sloping sections, when the power take-off (PTO) shaft connecting the rotary mower (bushhog) to the tractor came off. When he attempted to re-attach the shaft, the tractor began to roll down the steep slope; he lost control as it descended into the hollow. Apparently he attempted to jump from the left side of the tractor and his right foot became wedged between the high/low shift lever; as a result his body went under the left rear tire and was caught between the tire, the ground, and a cement water basin. Emergency medical services (EMS) were called, and the victim was pronounced dead at the scene. The FACE investigator concluded that, to prevent similar incidents, the following precautions should be taken:*

- Machinery should be kept in good working condition.*
- Operators of ROPS (rollover protective structure) -equipped tractors should always wear seatbelts.*

## INTRODUCTION

*On July 9, 1996, FACE investigators were notified by a call from a county coroner of the July 8 death of a 70-year-old farmer. An investigation was initiated, and a site visit was made on August 23. Prior to the visit, information about the case had been obtained via phone from the county coroner, who had been present at the scene. Interviews were held during the site visit with the coroner and a deputy coroner, both of whom are also county EMS workers. Photographs and measurements were made of the scene and the equipment involved. Copies of the coroner's investigation report and photographs were obtained. No autopsy was performed.*

*The victim had been involved in farming all his life and had lived with his wife on this farm most of his adult life. He was a full-time farmer and a well-known and respected member of the community. His son lived on the same road, approximately a mile from the victim's home. The victim had been in relatively good health prior to this incident and was on no medications. Eight years prior to this incident, the victim's brother had been killed on this farm in an incident involving a tractor and fertilizer spreader on a steep grade.*

*The tractor involved in this incident was a 1992 Ford Model 4630 with a 55-horsepower engine, which had been purchased by the victim on February 13, 1992. The tractor was equipped with a rollover protective structure (ROPS), a seatbelt, and a 3-point hitch. It was very well maintained. The 6-foot rotary mower with 3-point hitch was an older model; no brand name was visible.*

## INVESTIGATION

*On the day of the incident, the weather was warm and sunny. The victim had worked that morning, beginning about 9:00 am, and had come in for lunch with his wife at approximately 2:00 pm. He was mowing pasture land, which was very rough terrain containing a high ridge and deep hollows. After completing the top portion of the ridge, he began mowing the slopes. There were no witnesses to the incident, but the following pieces of evidence suggest a probable scenario. The PTO shaft, which had come off the tractor in the past, was laying on the ground near the top of the ridge, where the victim had stopped mowing (approximately 75 feet from the tractor's final rest). At this point the slope of the ground measured 10 degrees. A nail was found in the victim's pocket, which the coroner surmised had probably been intended for use in re-attaching the PTO shaft. About 10 feet further down the hill, at a point where the slope measured 15 degrees, the victim's cap was on the ground. A little further down the hill was a rocky gulley where the slope measured 23 degrees. At the bottom of the hollow was a round cement catch-basin for water. The tractor was found in seventh gear, which the family reported the victim usually used for bush-hogging. The engine stop was found pulled out, indicating that the engine had been turned off.*

*Apparently the victim stopped mowing in order to re-attach the fallen PTO shaft, and then lost control of the tractor as it began to roll down the hill. He may have dismounted and remounted the tractor, or he may only have intended to dismount but not been able to do so because the tractor began to roll. The victim's son, who lives across a hollow and a road from the site of the incident, was alerted when he heard the tractor crashing through brush but no engine noise. He ran to alert his mother, and then to the pasture to investigate, where he found his father at the*

*bottom of the pasture hollow, trapped between the tractor's rear wheel, the cement catch-basin, and the ground. His right foot was caught, on the left side of the tractor, between the tractor floor and the high/low shift lever, indicating that he might have attempted to jump just before the tractor hit the cement catch-basin. When the tractor hit the catch-basin, because the victim's right foot was caught, his body went under the tractor's left rear wheel and was crushed by the wheel against the cement and the ground.*

*The victim's son then called out to his mother to summon help. She placed the call to 911 at 3:25 pm, and EMS personnel arrived at the scene at 3:41 pm. In this county, the EMS workers also serve as coroner and deputy coroners; the first emergency worker to arrive at the scene was a deputy coroner, who estimated the time of death at 3:15 pm.*

### **CAUSE OF DEATH**

*The cause of death as listed on the coroner's investigation report was "multiple traumatic injuries" and "tractor accident." No autopsy was performed.*

### **RECOMMENDATIONS/DISCUSSION**

*Recommendation #1: Machinery should be kept in good working condition.*

*Discussion: In this case, family members reported that the PTO shaft had fallen off the tractor in the past. Although we cannot be certain, it is believed that the nail found in the victim's pocket was probably intended for use in re-attaching it. Had the PTO been properly repaired, the hazard of stopping the tractor in steep, rough terrain might have been avoided.*

*Recommendation #2: Operators of ROPS (rollover protective structure) -equipped tractors should always wear seatbelts.*

*Discussion: Wearing a seatbelt while driving a tractor will keep the operator from being thrown off the vehicle while driving over rough terrain or making sharp turns and will assure that the driver remains in the ROPS-protected zone. In this case, remaining on the tractor would have been a safer choice than attempting to jump from it.*