

FACE INVESTIGATION

SUBJECT: Tractor Runs Over Farmer After he Dismounts to Repair Jammed Hay Baler

SUMMARY:

A 68-year-old male dairy farmer (the victim) died after he was run over by a tractor. He had been driving the tractor in a hayfield with a PTO-powered round baler attached when the baler jammed. The event was unwitnessed, but it appears that he stopped the tractor on the downward slope of a hillside, turned the PTO off, left the tractor running with the transmission in neutral, and dismounted the tractor. The victim may have been reaching for a walking cane he kept next to the tractor seat when the tractor began to roll downhill. Apparently, the left rear wheel dragged him for 15-20 feet before running over his chest. When the farmer failed to return to the farmhouse at the end of the day, his wife drove to the field where he had been working and found him lying unresponsive on the hillside. She attempted CPR, then called for emergency services. The victim was pronounced dead at the scene. The tractor with the round baler attached was found at the bottom of the hill, with the engine still running. The FACE investigator concluded that, to prevent similar occurrences, farmers and farm workers should:

- ! **shift the tractor into park, set the brakes and turn off the engine before dismounting from the tractor. For tractors without a park position, farmers should shift into neutral, set the brakes and turn off the engine before dismounting.**
- ! **seek and use the services of organizations and agencies that provide technical assistance and/or adaptive equipment to agricultural workers with disabling conditions**

INTRODUCTION:

On September 30, 1995, a 68-year-old male dairy farmer died after being run over by a tractor tire. The Wisconsin FACE field investigator was notified by the Wisconsin Department of Industry, Labor & Human Relations, Workers Compensation Division, on October 23, 1995. On January 24, 1996, the field investigator visited the farm and met with the victim's wife and a farm worker. The FACE investigator also obtained the death certificate, the sheriff's report, a newspaper description of the incident, and the state climatologist's weather report of the day.

The farmer and his wife had owned and operated the 200-acre dairy farm for over 46 years, milking about 40 cows daily and raising corn, oats and hay. A farm worker worked part-time on the farm, but was not working at the time of the incident. There were no written safety policies or procedures for the farm activities. The victim had managed the farm and performed the field work for most of his life, having learned farming through on-the-job experience. He had operated all of the tractors used on the farm, and was experienced with the tractor involved in the incident. The victim had moderate to severe knee pain for at least 10 years before the incident, and always used two canes to walk. He was unable to flex his right knee.

INVESTIGATION:

The dairy farm property consisted of a farmyard with dairy barn, silos, and feed and equipment storage buildings, with 197 acres of crop and hay fields surrounding the farmyard and farmhouse. The hayfield where the incident occurred was about a ½-mile from the farmyard. On the day of the incident, 0.1 inch of rain fell in the area, however the hayfield was dry at the time the incident occurred.

The tractor involved in the incident was purchased new by the farmer 20 years ago. Although this tractor had not been modified since it was purchased, he owned at least one other tractor that had been adapted with an extra step to make it easier for him to get on and off without bending his knee. The tractor involved in the incident had mounting steps in front of the left rear tire, consisting of a 5/8"-wide, 8-inch long metal rung located 21" from the ground, and a metal platform 9" above the rung. The platform also served as a footrest when the tractor was in operation. A clutch pedal was in front of the platform, and a fender was attached to the outside edge of the platform. This left an approximately 6" wide opening for the operator to step through when mounting or dismounting the tractor. The tractor had separate operating brakes for each rear wheel, controlled by foot pedals on the right side of the tractor. Since the farmer was unable to bend his right knee, he was forced to shift his entire body to the left in the operator's seat and use his stiff right leg whenever he set the brake pedals. The gear shift lever was mounted on the operator deck, to the right of the operator seat. (Figure 1). When dismounting from this tractor, the victim customarily used one cane to assist as he stepped down from the platform. After reaching the ground, he would stand in front of the left rear tire, retrieve a second cane that he kept on the left side of the tractor seat before turning and proceeding to his destination.

On the day of the incident, the farmer had done his usual milking and field chores without any apparent problems. Around 4:30 P.M., he informed his wife that he was driving the tractor and the round baler to the hayfield to make one bale for cattle feed for the evening. This task usually took less than one hour. The event was unwitnessed, but it appears that he stopped the tractor on the downward slope of a hillside after the baler jammed. The victim turned the PTO off, left the tractor running with the transmission in neutral, and dismounted the tractor. He was apparently standing in front of the left rear tire and may have been reaching for one of the two canes he kept next to the tractor seat when the tractor began to roll downhill. The left rear wheel dragged him for 15-20 feet before running over his chest. When the farmer failed to return to the farmhouse by 6:00 P.M., his wife drove to the field where he had been working and found him lying unresponsive on the hillside. She attempted CPR, then called for emergency services. The victim was pronounced dead at the scene. The tractor with the round baler attached was found at the bottom of the hill, with the engine still running. After the incident, the tractor brakes were checked and found to be in good working condition.

CAUSE OF DEATH: The coroner's report listed the cause of death as massive chest trauma.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Farm tractor operators should shift the tractor into park, set the brakes and turn off the engine before dismounting from the tractor. For tractors without a park position, farmers should shift into neutral, set the brakes and turn off the engine before dismounting.

Discussion: Tractors will roll downhill if parked on an incline without an effective braking device, and the vibration created by a running engine may increase the possibility of initiating the rolling motion. Tractor operators can prevent tractors from rolling by setting the brakes and turning off the engine before dismounting.

Recommendation #2: Farmers and farm workers with functional limitations caused by illness or injury should seek and use the services of organizations and agencies that provide technical assistance and/or adaptive equipment to agricultural workers with disabling conditions.

Discussion: Farm machinery, including tractors, is designed and manufactured for use by individuals with full functional capacity. Physically disabling conditions, such as illness or injury, can impair a farm worker's ability to operate a machine safely when carrying out his or her work duties. Technical assistance in designing and fitting adaptive equipment is available from agricultural safety specialists, including agricultural engineers, state vocational rehabilitation counselors, agricultural equipment and supply manufacturers, and Extension programs that serve people with physical disabilities. This incident might have been prevented if the brake pedals and steps of the tractor had been adapted to permit easier and more comfortable braking, mounting and dismounting of the tractor.

FIGURE 1

