

**INCIDENT FACTS**

**REPORT #:**

71-191-2020

**REPORT DATE:**

February 1, 2020

**INCIDENT DATE:**

July 26, 2019

**VICTIM:**

28 years old

**INDUSTRY:**

Apple orchard

**OCCUPATION:**

Orchard tractor operator

**SCENE:**

Orchard service road

**EVENT TYPE:**

Tractor rollover



Arrow shows where the tractor left the road and rolled down a 6-foot embankment.

[For a slideshow version, click here.](#)



This narrative is an alert about the tragic loss of life of a worker and is based on preliminary data ONLY and does not represent final determinations regarding the nature of the incident or the cause of the injury. Developed by WA State Fatality Assessment and Control Evaluation (FACE) Program and the Division of Occupational Safety and Health (DOSH), WA State Dept. of Labor & Industries. The FACE Program is supported in part by a grant from the National Institute for Occupational Safety and Health (NIOSH grant# 5U60OH008487). For more information visit [www.lni.wa.gov/safety-health/safety-research/ongoing-projects/work-related-fatalities-face](http://www.lni.wa.gov/safety-health/safety-research/ongoing-projects/work-related-fatalities-face).

**Operator Dies When Orchard Tractor Rolls Down Embankment**

**SUMMARY**

A 28-year-old worker died when the orchard tractor he was operating with an attached sprayer went down an embankment and rolled over.

He had worked as a tractor operator for three months at the apple orchard and had completed the employer's tractor training program.

On the day of the incident, he was applying insecticide to trees at the orchard. The tractor was a low profile, narrow chassis orchard/vineyard type tractor. Its wheel track was four feet wide. The sprayer contained an estimated 350 gallons (approximately 2800lbs.) of insecticide solution.

He started his shift at 12 midnight. He and other members of the spray crew met with their supervisor who explained their duties for that shift. He and another tractor operator were working as a team spraying trees in a block he had sprayed multiple times over the past several months.

The trees in this block were mature with a full canopy. Because of this, the area was exempt from the Washington State rollover protective structure (ROPS) requirement, as use of ROPS would have interfered with normal operations. Both operators had their tractor ROPS in the down position and their headlights on.

At about five a.m., the operator's coworker went ahead down a sloping orchard row and then turned onto a dirt service road to go to another area. Shortly after, the coworker looked behind and did not see the lights of the operator's tractor so he turned around to look for him.

He found the operator's tractor at the bottom of a 6-foot embankment. It had left the service road a few yards from the orchard row and rolled down the embankment. The operator was lying next to the tractor. He died from a skull fracture due to blunt force trauma.

Investigators concluded that the operator had most likely misjudged the turning distance of the tractor and steered too wide as he came out of the row onto the road. The weight of the tractor and sprayer caused the edge of the road to crumble, leading it to roll down the embankment. In addition, the lighting near daybreak may have affected his visibility of the embankment at the edge of the road.

***Between 2001 and 2019, 18 orchard tractor operators died in Washington State when their tractors rolled over. In all of these incidents, ROPS were either not installed or were in the down position.***

**REQUIREMENTS**

- Washington Administrative Code, Chapter 296-307 Safety Standards for Agriculture, Part F, Rollover Protective Structures (ROPS) for Tractors. See [WAC 296-307](#)

**RECOMMENDATIONS**

FACE investigators concluded that, to help prevent similar occurrences:

- Employers should mark edges of hazardous embankments with visual cues, such as elevated reflective stakes, fencing, or permanent barriers to alert equipment operators.
- Workers should be trained to use extreme caution when operating tractors on or near sloped terrain, ditches, or embankments.



**Overturned tractor at bottom of embankment.**