

The Decline of Work-Related Deaths in Agriculture

A 70-year-old part-time farmer died in 2002 when his Farm-All 656 tractor equipped with a front-end loader rolled over on top of him. He was on an asphalt paved public road, traveling between farm fields. The tractor rolled over when he drove too close to the edge of the road. The 30-year-old tractor was not equipped with a roll-over protection structure (ROPS). Since 2001, there have been 36 tractor rollover related deaths in Michigan.



The Challenge

Agriculture has had the highest work-related fatality rate of all Michigan industry sectors for 10 of the past 13 years. Farms are frequently family-owned, and family members are often the main, if only, “employees” including children as young as six years old. Farming is dangerous, presenting a wide spectrum of hazards. Because farm equipment is very expensive and also built to last, older equipment is still being used that lacks the safety enhancements found in newer equipment. Machine-related deaths have accounted for 43%, or 99 of the 232 farming deaths from 2001-2013; 74% of those 99 deaths involved tractors. An additional factor that contributes to the hazards when planting, treating, and harvesting crops is long work hours, often dictated by the weather, pressuring farmers to complete their work within narrow windows of time. Further, as the farming population ages, associated age-related health concerns may increase the risk for fatal injury. In fact, age-related factors have been related to several of Michigan’s more recent farm fatalities. Alternatively, children who work on the family farm present an additional age-related hazard in this industry; Michigan has had 10 deaths among youth farm workers under the age of 19 over the past 13 years. Lastly, farms are “exempt” from many of the safety, health, and youth employment standards that apply to other types of industry, and there is no requirement to retrofit older equipment.

The Response

Michigan uses a multi-pronged approach to prevent work-related fatalities in the agricultural industry. Educational outreach directly to farmers during training sessions, which they must attend for required continuing education credits for pesticide application, has been one of the primary ways Michigan has increased awareness of farming hazards in the community. The occupational health surveillance center at Michigan State University has partnered with Michigan Farm Bureau, MSU Extension agents, agricultural advocacy groups, and agricultural specialists to publish farm safety articles in agricultural journals, conduct educational presentations and radio interviews, and develop public service announcements focusing on farm safety. We have created opportunities in previously untapped outlets for educational outreach, including the annual Michigan Safety Conference, a long-established forum for thousands of safety and health representatives.

“There are so many health and safety challenges in agriculture. Since 2001, we have worked to raise awareness of the hazards and promote safety in farming. We will not be satisfied until we have eliminated all farm-related deaths in our state.”

-Dr. Ken Rosenman, MSU

The Impact

Michigan agricultural work-related deaths have declined from a high of 31 deaths in 2003 to 13 in 2013. Equipment-related fatalities have declined from a high of 22 in 2003 to two in 2013.

For more information, visit the Michigan State University Occupational and Environmental Health website:

<http://www.oem.msu.edu/AnnualReports.aspx>