

# Gaming for agricultural safety

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Hazard Ridge Demo. Credit: University of Kentucky

Family farming differs from other professions because people in this field both work and live in the same location. This means the risk of injury in the workplace is higher than usual; you never leave the workplace. Agriculture ranks among the most dangerous industries, with an estimated annual cost of agricultural injuries exceeding \$4.5 billion.

Researchers in the University of Kentucky College of Education, in partnership with the Southeast Center for Agricultural Health and Injury Prevention in the University of Kentucky College of Public Health, began research to see how a video game can be used to educate young farmers.

The leading causes of death in agriculture include tractors, machinery, motor vehicles and electrocution. Jennifer Watson, research coordinator for the Southeast Center for Agricultural Health and Injury Prevention, said one of the goals for the [game](#) is to "overcome the culture of comfort." Spending their entire lives around dangerous equipment lulls those working and living on farms into a false sense of safety and lessens their belief that they are at risk for [injury](#)." However, without proper preventive measures and practices, the risk of injury or death is still high.

Since 2013, Watson has worked as a member of Dr. Joan Mazur's research team. Mazur, a professor of Instructional Systems Design and director of the Digital Learning and Design P-20 Innovation Lab, is currently researching how a [video game](#) can teach young people in the agricultural industry about potential hazards, safety tips and the effects of injury.

Hazard Ridge, a 3-D video game developed in partnership with Super Souls, simulates an injury that has occurred in a small rural town where teens are disappearing and the town is going bankrupt. Players serve as the investigator of this issue and learn how agricultural injuries have negative effects on the town's economy and citizens. The game teaches investigative skills and educates on how to conduct a financial analysis of injury.

Since beginning it's piloting in 2013 the game has been used by ag economics students in the University of Kentucky College of

Agriculture, Food and Environment and by students in high schools in the state. The game has also been awarded the bronze medal in the 2016 International Serious Play Awards Competition. The tool is designed to be integrated into safety curriculum and, according to Watson, has the potential to be utilized by agricultural organizations such as Future Farmers of America and 4-H. The economic costs taught in the game can also be applicable in various geographic areas.

Gaming and technology are effective teaching tools and previous research supports that. Injuries that impact young farmers impact the future of farming and also affect people who don't work on farms. Hazard Ridge serves as a means of sending that message and teaching safety skills to prevent injury.

Provided by University of Kentucky

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