

A Roadmap of Collaboration for Grain Safety Awareness

Building Community Capital for Farmers and First Responders

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GRAIN C.A.R.T. PROGRAM GOAL

The overarching goal was to develop a comprehensive agricultural rescue program. The program consists of Ohio Fire Academy curriculum, and professional training for first responders, as well as OSU Ag Safety Grain Handling Awareness curriculum for outreach education and awareness for farmers and agricultural industries.



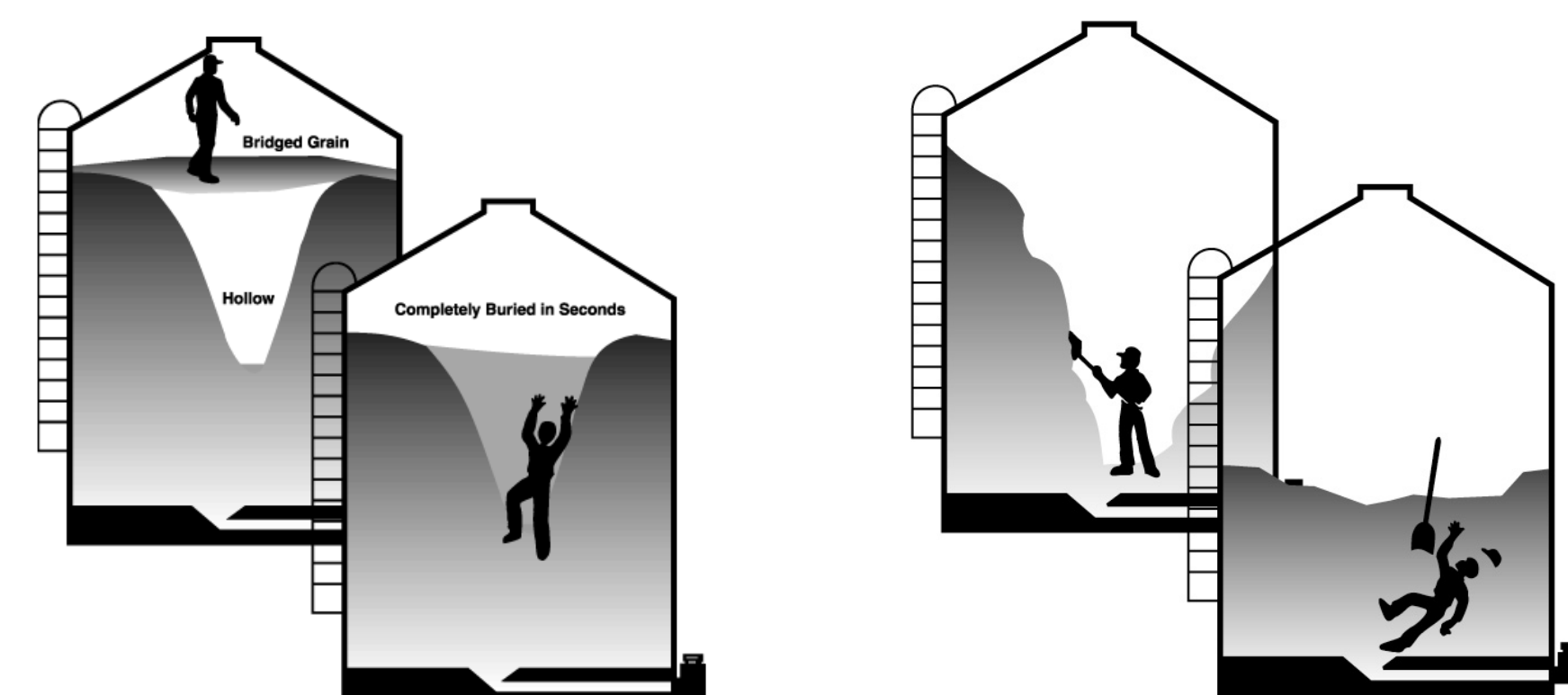
Grain Comprehensive Agricultural Rescue Trailer

PARTNERSHIPS

This program maximizes the public-private partnerships between Ohio State University (OSU) Extension, the Ohio Fire Academy, and agribusinesses to address Ohio's agricultural rescue training and education opportunities. The purpose of this project was to build a state-of-the-art mobile grain bin rescue training unit for direct delivery training and outreach education. OSU Extension and the Ohio Fire Academy have a history of agricultural rescue education collaboration that began in the late 1980's. Examples include the training modules for on-site use at the Fire Academy, agricultural rescue demonstrations at Farm Science Review, presentations at OSU Extension field day events, and Ohio Bureau of Workers' Compensation Safety Congress. The program has been requested by communities, hospitals, and fire departments for on-site delivery at events such as county fairs, Bureau of Workers' Compensation regional training events, and regional continuing education events for first responders.

AIM

Create various levels of rescue exercises, that simulate real life rescue situations first responders may encounter in rural emergencies. Increase the capacity within rural rescue teams by optimizing the first responders' knowledge and skill when responding to rural emergencies. Create an awareness for hazards on farms and reinforce best management practices while working in and around grain storage bins.

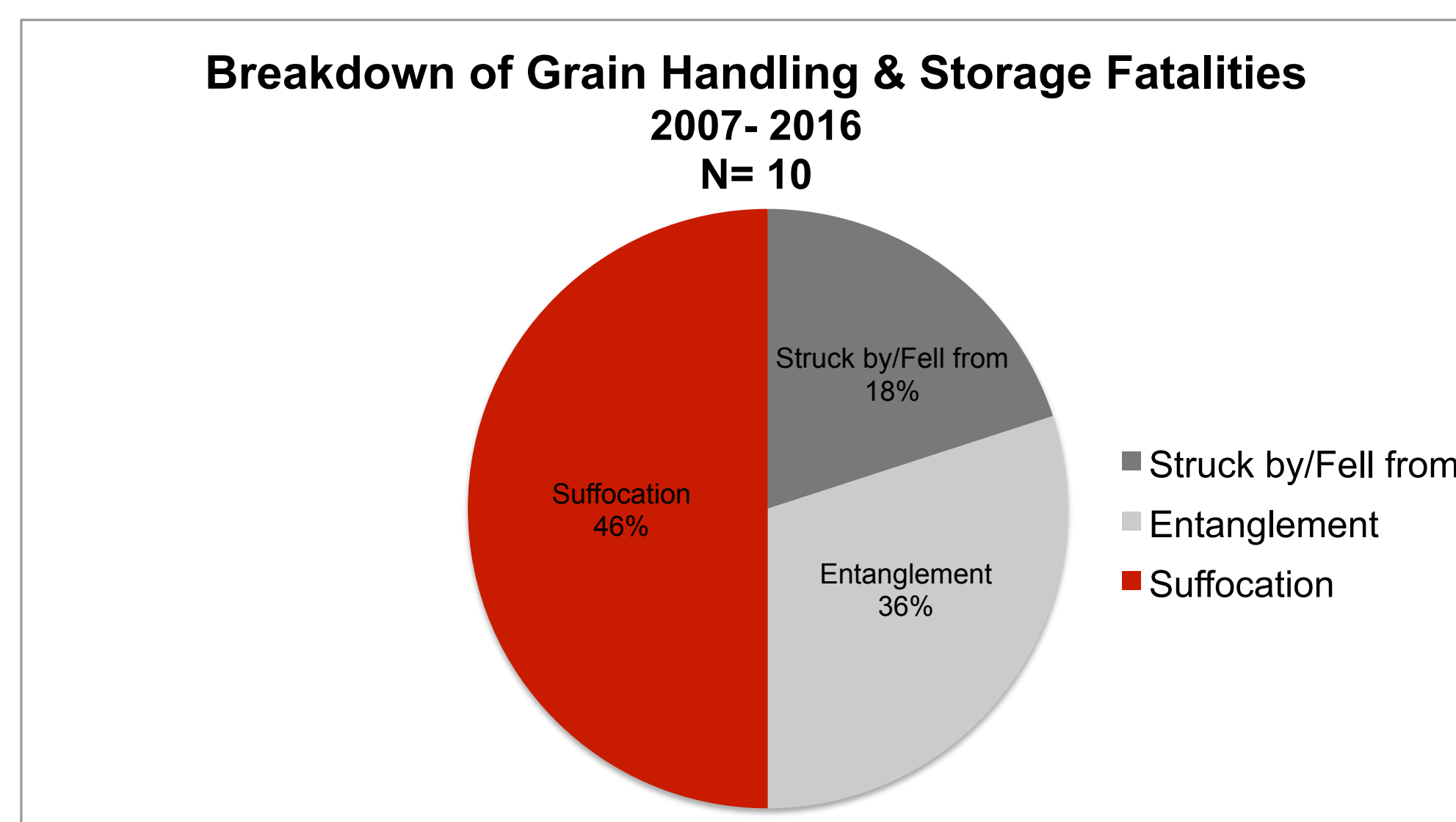


Dangerous conditions inside a bin.

SAFETY LANDSCAPE

In recent years there has been a rise in agriculture of on-farm grain storage, and both increased size and number of bins have changed the safety landscape. U.S. reported cases of grain entrapment and organic dust toxic syndrome rise points to the need for safety education for farmers. Additionally, entrapment rise highlights a gap in first responder training specific to this need. Solely addressing the farmer education component through Extension will impact the need of rescue, but alone will not entirely eliminate incidences of grain entrapment and engulfment. Building the agricultural operations knowledge base and technical skills of first responders with a new sustainable programming model became a vital approach in elevating the knowledge base to lead to successful rescue outcomes when first responders are dispatched.

Ohio has 74,900 farms, comprising approximately 14 million acres of cropland. The agriculture sector is a critical component to Ohio's economy as the number one industry, contributing more than \$94 billion to the state's economy. Work injury can significantly impact productivity and financial viability on those farms.



Distribution of cause for grain handling fatalities.



Cofferdam/rescue tube in use for training.

These images show a simulated rescue utilizing the rescue components OFA trains first responders with in their delivery of field curriculum.

NEED

Aiming to support solving societal challenges and keeping farmers safe guides outreach education for the Extension Ag Safety & Health Program as the health and vitality of the American farmer can have far reaching community, state, and national impacts. This poster will highlight a multi-faceted collaboration weaving awareness, integration, stewardship, accountability, and advocacy into one project resulting in student growth and learning, stakeholder partnerships, and impactful interactive outreach education. Viewers who are looking for innovative ways to partner in outreach engagement can use this project as a roadmap.

The State Safety Leader and Extension faculty with assistance of agricultural students enrolled in an engineering design course built a training simulator to address safety in an innovative way. Using a service-learning approach, the Grain Comprehensive Agricultural Rescue Trailer was constructed on a flatbed semi-trailer with replica grain facility equipment. It travels the state allowing innovative access to Extension, delivering outreach education and technical rescue courses via a classroom on wheels. This combination of Extension, academic student teams, and state fire instructors have positively piqued the interest and training capacity in rural communities with issue-based programming. The adapted program delivery method strengthens partnerships and serves as a model to be replicated.

CONCLUSIONS

The Grain C.A.R.T. has been a multi-faceted collaboration between OSU Extension and the Ohio Fire Academy. The OSU Ag Safety Program staff and the Ohio Fire Academy instructors work together utilizing this simulator to provide effective training and safety outreach to improve the lives of participants in their sessions and ultimately reduce the overall injury and fatality rates on Ohio farms. The collaboration facilitates student growth and learning, bridges efforts of state entities, cultivates partnerships with stakeholders, and delivers interactive outreach education for impactful outcomes across a broad spectrum of rural agricultural audiences by highlighting the design, build, and development of outreach education.

The Grain C.A.R.T. has reached a rural audience of 10,000+ in the almost four years it has been utilized for outreach education, trained 2,797 first responders, and has served as a catalyst in fostering further project development.

Get involved by a supporting efforts to bring the Grain C.A.R.T. to your community for grain safety programming. Organize fundraising efforts to purchase agricultural rescue equipment for a local fire department. Share expertise on safety and health issues for agricultural audiences through collaboration with us.



Unloading grain.