

# MAKING A DIFFERENCE



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## Grand Challenge: Global Food Systems

### Title: Safe Tractor and Machinery Operation

**Why is this issue important?** Agriculture is ranked among the most hazardous industries in the U.S. In 2018, fatal work injury rate was 22.8 per 100,000 full-time equivalent workers. Since it is common for youth to be involved in the farm or ranch at a young age, youths are included in these injury numbers. Of the leading sources of fatalities among all youth, 25% involved machinery, 17% motor vehicles (including ATV's), and 16% drowning. In 2014, an estimated 11,942 youth injuries occurred on farms.

**How did Extension address this issue?** Youth ages 14 and 15 are required to complete a tractor safety course in order to be legally employed on a farm or ranch. To help prepare some of those youth for the summer work season, the Central Kansas Extension District (CKD) and Great Plains Manufacturing hosted a tractor safety class in early March. This program met the requirements of the U.S. Department of Labor's Hazardous Occupations Order for Agriculture (HOOA), where the students were certified after successfully passing a 50-question exam and doing both an operating skills and driving test administered by the employer. The course included both classroom instruction and interactive demonstrations.



The class included:

- Presentations on Safety Basics, Agriculture Hazards, The Tractor (safety, maintenance, driving, regulations), Connecting and using implements, and Materials Handling.
- A walk-around of common equipment youth may encounter or use (ex. mowers, skid loaders, planters, tractors).

Through the educational program, 13 youth and one adult were reached. Everyone was properly educated on farm tractor safety and they gained vital knowledge on maintenance and operation of tractors, machinery, and equipment they will likely use when working on the farm.

### What was the impact?

- All 13 course attendees passed the National Safe Tractor and Machinery Operation Program Written Test and will obtain their certificates once the operating skills and driving test is completed with their employer.
- All attendees who completed the program survey said their 'level of knowledge' on farm safety increased by at least two levels from before to after the program.
- Numerous students mentioned that as a result of the course, they would take grain bin safety more serious and are more educated on the hazards & dangers involving Power Take Offs (PTO).

Kansas State University Agricultural Experiment Station and Cooperative Extension Service  
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