

Characteristics of farm equipment-related crashes involving youth occupants



Figure 1. Farm equipment-related crashes involving youth under age 18

Findings

- A total of 434 farm equipment-related collisions involving 505 child or adolescent occupants (Figure 1).
- More youth occupants were drivers (n=307) than passengers (n=198)—90% of passengers were driven by adults.

Table 1. Proportion of youth occupants injured by crash characteristics

| Crash Characteristics | Injury N(%) |
|----------------------------|-------------|
| Light Conditions | |
| Daylight | 73 (18.6) |
| Dark | 33 (34.0) |
| Other | 3 (21.4) |
| Farm Vehicle Action | |
| Straight | 74 (29.3) |
| Turning | 23 (11.9) |
| Other | 9 (20.5) |
| Impact | |
| Non-collision | 38 (47.5) |
| Rear-ended | 22 (21.4) |
| Angle/Sideswipe | 24 (10.3) |
| Other | 22 (26.5) |

Problem

Operating or riding on farm equipment is one of the leading causes of farm-related injuries and fatalities in children and adolescents. As a result, particular emphasis should be placed on determining the contributing factors. Data received from Department of Transportation across nine Midwestern states from 2005—2010 were used to answer the following question.

What factors are associated with experiencing an injury, given a crash, in youth occupants on farm equipment?

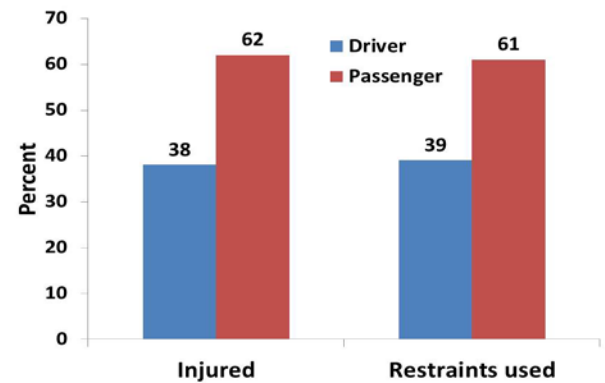


Figure 2. Percent of youth occupants injured or used restraints by position

- 61% of passengers used restraints, yet passengers comprised 62% of those injured (Figure 2). Youth occupants were injured, given a crash, during the dark (34%), or while traveling straight (29%) (Table 1).
 - A high proportion of youth occupants involved in a non-collision was injured (48%).

Safety Tips

Allowing children to ride on farm equipment on or off the farm can be very dangerous.¹

Youth who are under age 16 are unable to safely operate large farm equipment on the roadways.²

- The use of rollover protective structure (ROPS) and seat belts are encouraged to lower the occurrence of injury in non-collision crashes.³

References

1. Schwab, C. (2013). Extra riders mean extra dangers -- Safe Farm. Retrieved from <https://store.extension.iastate.edu/Product/Extra-riders-mean-extra-dangers-Safe-Farm>.
2. Marshfield Clinic (2015). Tractor operation chart. Retrieved from http://www.nagcat.org/nagcat/?page=nagcat_guidelines_posters.
3. Schwab, C. & Hanna, M. (2013) Use tractors with ROPS to save lives. Retrieved from <https://store.extension.iastate.edu/Product/pm1265d-pdf>.

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