Agricultural Injuries in the Central States Region

Annual Surveys Covering Years 2011-2015
Preliminary Results

Risto Rautiainen, PhD, Professor (Principal Investigator)
Kelsie Musil, MS, Graduate Assistant (Co-Investigator)
Lorena Baccaglini, PhD, Associate Professor (Co-Investigator)

Central States Center for Agricultural Safety and Health (CS-CASH)
University of Nebraska Medical Center
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CS-CASH Farm and Ranch Injury Surveys 2011-2015

- Mail surveys designed by CS-CASH
- Administered by USDA-NASS
- Stratified random sample of operations, 1000 per state
- Conducted annually; 2 mailings, no incentives
- Four-page survey form
- Five annual rounds of data collected
- Data analysis by CS-CASH research team from datasets provided by NASS without personal identifiers
Surveys covered a seven-state region

- Iowa
- Kansas
- Minnesota
- Missouri
- Nebraska
- North Dakota
- South Dakota
Farm and Ranch Operations
CS-CASH farm and ranch injury survey
Number responding operations by state, 2011-2015 (n=10,986)

Source: CS-CASH Injury Survey
Operations by size, all states combined

Source: CS-CASH Injury Survey
Operations by total sales, all states combined

Source: CS-CASH Injury Survey
Type of Organization

- Family or Individual: 87.1%
- Partnership: 6.1%
- Incorporated: 5.1%
- Other: 1.5%

Source: CS-CASH Injury Survey
Operations with internet access

<table>
<thead>
<tr>
<th>State</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>73.11</td>
</tr>
<tr>
<td>Kansas</td>
<td>67.17</td>
</tr>
<tr>
<td>Minnesota</td>
<td>70.06</td>
</tr>
<tr>
<td>Missouri</td>
<td>62.96</td>
</tr>
<tr>
<td>Nebraska</td>
<td>71.07</td>
</tr>
<tr>
<td>N. Dakota</td>
<td>75.47</td>
</tr>
<tr>
<td>S. Dakota</td>
<td>71.60</td>
</tr>
</tbody>
</table>

Source: CS-CASH Injury Survey
Operators
Average age of operators

- Operator 1: 60.06
- Operator 2: 52.24
- Operator 3: 39.64

Source: CS-CASH Injury Survey
Operators by gender (%) (n=15,704)

Source: CS-CASH Injury Survey
Time operators spend at principal occupation

- Operator 1: 60% Farm/Ranch Work, 40% Other Work
- Operator 2: 50% Farm/Ranch Work, 50% Other Work
- Operator 3: 60% Farm/Ranch Work, 40% Other Work

Source: CS-CASH Injury Survey
Percentage of time worked on farm by all operators combined

Source: CS-CASH Injury Survey
Injuries
Injury rate for all operators by state, 2011-2015

<table>
<thead>
<tr>
<th>State</th>
<th>Injury rate/100 person-years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iowa</td>
<td>7.68</td>
</tr>
<tr>
<td>Kansas</td>
<td>6.72</td>
</tr>
<tr>
<td>Minnesota</td>
<td>6.24</td>
</tr>
<tr>
<td>Missouri</td>
<td>5.66</td>
</tr>
<tr>
<td>Nebraska</td>
<td>7.33</td>
</tr>
<tr>
<td>N. Dakota</td>
<td>8.47</td>
</tr>
<tr>
<td>S. Dakota</td>
<td>8.07</td>
</tr>
<tr>
<td>All</td>
<td>7.09</td>
</tr>
</tbody>
</table>

Source: CS-CASH Injury Survey
Injury rate by year

- 2011: 7.53
- 2012: 7.52
- 2013: 6.15
- 2014: 8.15
- 2015: 6.26
- All: 7.09

Source: CS-CASH Injury Survey
Injury rate by year

<table>
<thead>
<tr>
<th>Year</th>
<th>Injuries/100 person-years</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>7.53</td>
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<tr>
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<td>All</td>
<td>7.09</td>
</tr>
</tbody>
</table>

Source: CS-CASH Injury Survey
Injuries by activity

89% Work
11% Leisure

Source: CS-CASH Injury Survey
Injuries by location where injury occurred

- Home/Office: 31%
- Farm Building: 17%
- Farm Yard: 40%
- Field/Pasture: 6%
- Road/Off-Farm: 6%

Source: CS-CASH Injury Survey
Injuries by cause/source of injury

- Tractor: 11%
- ATV: 5%
- Machinery: 18%
- Livestock: 8%
- Hand Tool: 1%
- Power Tool: 1%
- Chemical/Pesticide: 1%
- Working Surface: 1%
- Truck/Automobile: 6%
- Other Vehicle: 9%
- Water: 4%
- Other: 0%
- Other: 1%

Source: CS-CASH Injury Survey
Injuries by injured body part

- Head/Neck: 15%
- Eye: 4%
- Chest/Trunk: 3%
- Back: 18%
- Arm/Shoulder: 15%
- Finger: 4%
- Hand/Wrist: 13%
- Leg/Knee/Hip: 11%
- Toe: 1%
- Foot: 6%
- Other: 4%

Source: CS-CASH Injury Survey
Injuries by lost time due to disability

Source: CS-CASH Injury Survey
Medical care required

- 32% None
- 56% Doctor/Clinic Visit
- 12% Hospitalization

Source: CS-CASH Injury Survey
Summary of results; 2011-2015

• Response rates varied from 29% to 37%
• Avg. rate: 7.1 injuries / 100 operators per year
• Likelihood of injury to operator: 1 injury in ~14 years
• Average costs of injury:
  • Medical; out-of-pocket: $1,513
  • Medical; covered by insurance: $7,282
  • Medical; combined: $8,795
  • Estimate, including lost productivity and indirect costs (4*): $35,180