

Resources on Rural Injury Prevention: Child and Youth Agricultural Injuries



The Children's Safety Network (CSN) compiled this resource sheet to provide state public health professionals with information on preventing rural injuries in America. Since there is no national consensus on the definition of "rural," rural areas are defined broadly as those with low population density, geographic isolation, and/or small population size. The resource sheet is divided into five sections—1) Data, 2) Resources, 3) Organizations, 4) Recommendations and Strategies for Preventing Agricultural Injuries, and 5) CSN's General Recommendations for Professionals Working in Rural Areas.

1. Data

Over 1.12 million youth lived on farms in 2006 with 42% living in the Midwest, 39% in the South, and the rest living in the West (13%) and Northeast (6%)ⁱ.

According to United States Department of Agriculture (USDA) data from 2006ⁱⁱ:

- More than half of all household youth performed work or chores on the farm.
- An additional 307,000 youth (youth not living on farms) were hired to do work on U.S. farms.
- Approximately 3,026 injuries (26%) occurred to children under 10 years of age who were living on farms.
- Nearly half of all injuries occurred to children between 10 years of age and 15 years of age.
- Nearly 75% of injured children were not actively working when the injury occurred.
- Falls accounted for 40% of all household youth injuries.

- Common sources of injury were animals (20%) and vehicles (17%).
- ATVs were the most common vehicle involved in household youth injury (66%).
- Youth living on livestock operations had a significantly higher rate of injury (11.9 injuries/1,000 youth) compared to their counterparts in crop operations (8.4 injuries/1,000 youth).

Only 30% of farm households with children younger than eight reported having an enclosed, fenced off play area in 2006ⁱⁱⁱ.

Between 1995 and 2002, an estimated 907 youth died on U.S. farms (43 fatalities per 100,000 youth), with most fatalities occurring to youth 16-19 years of age^{iv}.

Of the leading sources of fatal injuries to youth on U.S. farms, 23% percent involved machinery (includes tractors), 19% involved motor vehicles (includes ATVs), and 16% were due to drowning^v.

2. Resources

CSN's web page on rural injuries: <http://www.childrensafetynetwork.org/topics/showtopic.asp?pkTopicID=21>

The National Children's Center for Rural and Agricultural Health and Safety provides information about child safety by working to prevent exposure to hazards associated with agricultural work and rural environments.

- See information about research, community-based projects, and other key resources on child agricultural safety: <http://www.marshfieldclinic.org/NCCRAHS/>
- New 2011 Childhood Agricultural Injury Fact Sheet: http://www.marshfieldclinic.org/proxy/MCRF-Centers-NFMC-NCCRAHS-ChildAgInjuryFactSheet_Jan-2011.1.pdf

Key resources related to the National Center include:

- Childhood Agricultural Safety Network http://www.marshfieldclinic.org/nccrahs/?page=nccrahs_casn
- Safe Play guide book on farm safety: http://www.marshfieldclinic.org/nccrahs/?page=nfmc_nccrahs_safe_play_welcome
- From this site, you can also link to Keys to Creating Safe Play Areas, an interactive website for safe farms. <http://www.marshfieldclinic.org/safeplay/keystocreate/>

The National Agricultural Safety Database (NASD) provides a collection of publications about agricultural safety and health. It was developed with funding from the National Institute for Occupational Safety and Health (NIOSH) to educate workers and managers about the hazards associated with agriculture-related injuries, deaths, and illnesses and to share prevention information: <http://nasdonline.org/>

North American Guidelines for Children's Agricultural Tasks (NAGCAT): An updated edition (May, 2010).

These guidelines were released in 1999 as a resource to help adults match a child's physical and mental abilities with the requirements of agricultural jobs. Ten years later, the guidelines were shown to be effective in reducing childhood agricultural injuries. The most notable study, conducted in central New York by the Bassett Research Institute, showed that parents who assigned work based on the guidelines reduced child injuries by nearly 50%.

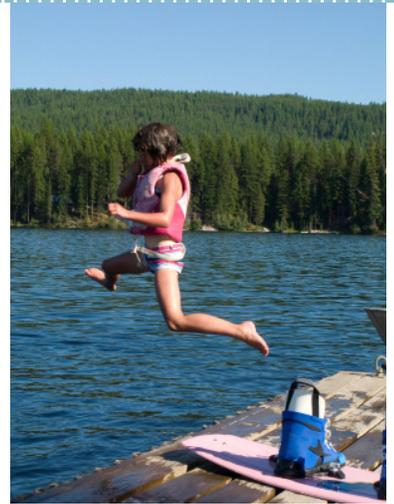
- Sixty-two NAGCAT posters are available online and intended for use by parents of children ages seven to 16 years.
- A new search function allows the user to type the name of a task in the search box, bringing up all relevant guidelines. <http://www.nagcat.org/nagcat/>

Injuries to youth on farms and safety recommendations, U.S. 2006: A NIOSH publication

This brief manual, published by NIOSH, highlights the injuries that young people incur during farm operations and offers recommendations for keeping children safe.

- The manual recommends: inspecting farms for hazards and removing as many hazards as possible; ensuring children are taught how to work safely with farm animals and machinery; and not letting children age 15 and younger perform any hazardous work. <http://www.cdc.gov/niosh/docs/2009-117/pdfs/2009-117.pdf>

Safety Guidelines for Hired Adolescent Farm Workers (SaGHAF) <http://www.marshfieldclinic.org/saghaf> is a collection of seven guidelines in English and Spanish to assist farm owners and supervisors in assigning tasks to their workers. Each addresses supervisor responsibilities for ensuring working conditions are appropriate and adequate (e.g., safety devices are in place, there is safe transportation to and from fields) and for assessing their teen workers (e.g., worker can operate vehicle controls, can lift and carry 15% of body weight). Training and supervision tips, specific to teens and to each job, are provided.





The NIOSH Agricultural Centers were established to conduct research, education, and prevention projects to address the nation's pressing agricultural health and safety problems. Each region has a NIOSH funded center on agricultural health and safety. Learn more about the centers by visiting: <http://1.usa.gov/eoEzeJ>

3. Organizations

These organizations may serve as useful resources or partners in farm injury prevention efforts.

- The Progressive Agriculture Foundation provides a variety of supports for communities selected to participate in the Progressive Agriculture Safety Day® program, a one-day hands-on workshop that teaches farm children and their parents' safe farm practices. <http://www.progressiveag.org/>
- The International Society for Agricultural Safety and Health (ISASH) is dedicated to the professional development of agricultural safety and health professionals, providing leadership in preventing agricultural injuries and illnesses to the agricultural community. <http://www.isash.org/>
- Farm Safety 4 Just Kids is a nonprofit organization based in Iowa, which serves the United States and Canada. Farm Safety 4 Just Kids provides resources and training to individuals and communities to conduct farm safety awareness and education programs. <http://www.fs4jk.org/>
- The HOSTA National Safe Tractor and Machinery Operation Program is a project of the U.S. Department of Agriculture's Cooperative State Research, Education and Extension Service (CSREES) at Pennsylvania State University. It trains 14- and 15-year-olds seeking employment in production agriculture. <http://www.nstmop.psu.edu/>
- The HOSTA Youth Farm Safety Education and Certification Program at Purdue University College of Agriculture developed a website for educators, youth, and potential employers to learn about the safety and legal issues related to employment of youth in agriculture. <http://www.agsafety4youth.info>

4. Recommendations and Strategies for Preventing Agricultural Injuries

Solutions to address agricultural safety issues include ^{vi}:

- Require youth to have a driver's license to operate tractors on public roads.
- Set higher age limits for youth tractor operation.
- Remove the family farm exemption from the child labor laws.
- Raise the age restriction for performing hazardous agricultural work within the child labor laws.
- Restrict access of preschool children to the agricultural worksite.

5. CSN's General Recommendations for Professionals Working in Rural Areas:

- Understand data and other sources of information to determine which rural subgroups are at greater/ lesser risk.
- Focus resources on underserved populations.
- Use an asset-based approach and recognize community protective factors when working in rural areas.
- Involve youth in planning activities and engage with them to strategize about solutions.
- Partner with 4-H and other rural serving groups.
- Contact your Regional NIOSH Agricultural Center
- When developing prevention messages, think strategically about your audience. Work with rural opinion leaders to develop and communicate prevention messages. Prevention-focused messages that say “don’t do this” may not resonate with audiences that value independence and/or have a lower level of trust in experts than do urban/ suburban populations.



ⁱ NIOSH. Internal analysis of the CAIS database. Morgantown, WV: National Institute for Occupational Safety and Health, 2007.

ⁱⁱ Hendricks, KJ and Goldcamp, EM. Injury Surveillance for Youth on Farms in the U.S., 2006. Journal of Agricultural Safety and Health. 16 (4): 279-291.

ⁱⁱⁱ NIOSH. Internal analysis of the CAIS database. Morgantown, WV: National Institute for Occupational Safety and Health, 2007.

^{iv} National Institute for Occupational Health and Safety (2007) Injuries to Youth US Farm Operations -2004. Available at: <http://www.cdc.gov/niosh/docs/2007-161/>

^v National Institute for Occupational Health and Safety (2007) Injuries to Youth US Farm Operations -2004. Available at: <http://www.cdc.gov/niosh/docs/2007-161/>

^{vi} From Nurture newsletter. <http://www.marshfieldclinic.org/proxy/MCRF-Centers-NFMC-NCCRAHS-pdf-nurture-Winter2008.1.pdf>. Drawing upon 12 research studies that they have led or been involved with in the past decade, William Pickett, Ph.D., from Queen's University and Barbara Marlena, Ph.D., of the National Children's Center for Rural and Agricultural Health and Safety, presented "Children and the Agricultural Work Environment: Building a Case for Change" at the Sixth International Symposium: Public Health and the Agricultural Rural Ecosystem, October 19-23, 2008, in Saskatoon, Saskatchewan.



Children's Safety Network
Education Development Center, Inc.
43 Foundry Avenue
Waltham, MA 02453-8313

For more information, contact Erica Streit-Kaplan at the
Children's Safety Network
617-618-2178 or estreit-kaplan@edc.org

www.ChildrensSafetyNetwork.org

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