



# A Review of Farm Accident Data Sources and Research: Summary and Introduction<sup>1</sup>

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## SUMMARY

In 1990, injuries struck over 12 out of every 100 full-time workers on farms employing more than 10 people, and almost 24 out of every 100,000 were killed in jobs involving agriculture, farming, and fishing.

These figures leave uncounted all accidents and deaths on the large proportion of farms run with fewer than 10 workers or operated only by the owner and family members. According to the Bureau of Labor Statistics, these casualty rates are 1.5 times higher than the average injury rates and 4.3 times higher than the average fatality rates for all private sector industries.

This bibliographical review traces the causes of such injuries and illnesses, and cites farm safety studies, including some on the health and safety of youth and farm safety education. Among other highlights, this review discusses the following:

- Farming presents unique safety problems not found in most other industries.
- National-level data concerning farm accidents have serious limitations, which raise questions about their accuracy and reliability.
- Case studies provide useful insights into causes and consequences of farm accidents, but generalizations cannot be made beyond the study area.
- Few safety standards exist for farm machinery and workplaces, and most such standards apply only to farms employing 11 or more workers.
- Little emphasis has been placed on researching the chronic effects of long-term exposure to pesticides and other farm chemicals.
- Farm operators and family members are aware of the dangers in farming, but may make decisions that under more ideal conditions would have been considered too dangerous.
- A large number of children are injured on farms each year. The farm is also often the home, and the children play on or near machinery. Sometimes children of migrant workers are injured as well.
- Most traumatic injuries involve machinery, with tractors being involved in most fatal accidents.
- Education, properly planned and executed, holds a great potential for improving farm safety. Farm safety education programs are most effective when operators, family members, farm workers, manufacturers, researchers, and farm safety specialists are all involved in program development.

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## INTRODUCTION

This report reviews current data sources and selected research concerning farm safety. The report is not intended to present an exhaustive review of farm safety literature.<sup>1</sup> Instead, its aim is to provide a synopsis of farm safety data and research that will help guide researchers and policymakers in their efforts to reduce injuries and illnesses on farms. More specifically, this report provides background to illustrate the continued need for farm safety research, highlights and evaluates national sources of data applicable to farm safety, and examines research in some of the major problem areas in farm safety.

Further information can be found in the following documents:

1. Background
2. Review of Data Sources
3. Review of Recently Published and Current Research
4. Research Directions for the Future
5. References
6. Appendix: A Summary of Minimum Age Requirements of the Fair Labor Standards Act

1. Readers seeking additional farm safety research should consult *Agricultural Safety and Health: A Resource Guide* (Zimmerman, 1992), *Abstracts* (Centre for Agricultural Medicine, 1992), and *Papers and Proceedings of the Surgeon Generals Conference on Agricultural Safety and Health* (U.S. Department of Health and Human Services, 1991 b).