

**Fatal Unintentional Farm Injuries
Among Persons Less Than 20 Years of Age
in the United States:**

Geographic Profiles

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Foreword

More than two million youth less than 20 years of age are potentially exposed to farm safety hazards each year—as farm residents, farm family workers, hired workers, children of migrant or seasonal workers, or farm visitors. Youth on farms may be exposed to a wide range of hazards, including machinery, electric current, firearms, bodies of water, grain storage facilities, and livestock. As a place of work and a place of residence, the farm presents unique challenges for injury prevention.

The NIOSH Childhood Agricultural Injury Prevention Initiative seeks to prevent farm injuries from work and nonwork-related exposures through a comprehensive program of surveillance, research, and partnership. In keeping with the breadth of the Initiative, this document presents data by state, Census region, and Census division for all youth fatalities on U.S. farms between 1982 and 1996. These data, drawn from the Vital Statistics Mortality files of the National Center for Health Statistics, indicate that nearly 2,200 youth were fatally injured on farms during this 15-year period, and that the leading causes of death varied considerably across geographic areas.

Although farm fatalities among youth have decreased markedly over the years, the toll remains too high. We hope this document will serve as a valuable resource to government agencies at all levels, policy makers, health and safety professionals and farm safety advocates in their efforts to develop focused and coordinated strategies to prevent youth injuries on farms.

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Contents

Foreword	iii
List of Tables	vii
List of Figures	xiii
Acknowledgments	xv
Public Health Summary	xvii
Introduction	1
Methodology	3
Data Summary	5
Prevention of Childhood Farm Fatalities	7
References	9
Additional Resources	11
Tables and Figures	13
Appendix	47

List of Tables

National Data

Table 1. Fatal farm injuries to persons less than 20 years, by year and age group, United States, 1982-1996	13
Table 2. Fatal farm injuries to persons less than 20 years, by gender and age group, United States, 1982-1996	14
Table 3. Percentage change in average annual number of fatal farm injuries to persons less than 20 years, by age group, United States, 1982-1989 and 1990-1996	14
Table 4. Causes of fatal farm injuries to persons less than 20 years, United States, 1982-1996	14
Table 5. Causes of fatal farm injuries to persons less than 20 years, by gender, United States, 1982-1996	15
Table 6. Causes of fatal farm injuries to persons less than 20 years, by age group, United States, 1982-1996	16
Table 7. Causes of fatal farm injuries to males less than 20 years, by age group, United States, 1982-1996	17
Table 8. Causes of fatal farm injuries to females less than 20 years, by age group, United States, 1982-1996	18
Table 9. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery, drowning, and firearms, by age group, United States, 1982-1989 and 1990-1996	19

Data by Census Region

Table 10. Fatal farm injuries to persons less than 20 years, by Census region and age group, United States, 1982-1996	20
Table 11. Percentage change in average annual number of fatal farm injuries to persons less than 20 years from all causes, by age group, Northeast Region, 1982-1989 and 1990-1996	20
Table 12. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery, by age group, Northeast Region, 1982-1989 and 1990-1996	20

Table 13. Percentage change in average annual number of fatal farm injuries to persons less than 20 years from all causes, by age group, Midwest Region, 1982-1989 and 1990-1996	21
Table 14. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery and drowning, by age group, Midwest Region, 1982-1989 and 1990-1996	22
Table 15. Percentage change in average annual number of fatal farm injuries to persons less than 20 years from all causes, by age group, South Region, 1982-1989 and 1990-1996	23
Table 16. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery and drowning, by age group, South Region, 1982-1989 and 1990-1996	23
Table 17. Percentage change in average annual number of fatal farm injuries to persons less than 20 years from all causes, by age group, West Region, 1982-1989 and 1990-1996	24
Table 18. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery, by age group, West Region, 1982-1989 and 1990-1996	24

Data by Census Division

Table 19. Fatal farm injuries to persons less than 20 years, by Census division and gender, United States, 1982-1996	25
Table 20. Fatal farm injuries to persons less than 20 years, by age group and Census division, United States, 1982-1996	25
Table 21. Causes of fatal farm injuries to persons less than 20 years, by Census division, United States, 1982-1996	26

State Data

Table 22. Fatal farm injuries to persons less than 20 years by age group and state, 1982-1996	28
Table 23. Fatal farm injuries to persons less than 20 years of age, by cause and state, 1982-1996	30

State Profiles

Table 24. Leading causes of fatal farm injuries to persons less than 20 years, Alabama, 1982-1996	32
Table 25. Leading causes of fatal farm injuries to persons less than 20 years, Arizona, 1982-1996	32
Table 26. Leading causes of fatal farm injuries to persons less than 20 years, Arkansas, 1982-1996	32
Table 27. Leading causes of fatal farm injuries to persons less than 20 years, California, 1982-1996	33
Table 28. Leading causes of fatal farm injuries to persons less than 20 years, Colorado, 1982-1996	33
Table 29. Leading causes of fatal farm injuries to persons less than 20 years, Florida, 1982-1996	33
Table 30. Leading causes of fatal farm injuries to persons less than 20 years, Georgia, 1982-1996	34
Table 31. Leading causes of fatal farm injuries to persons less than 20 years, Idaho, 1982-1996	34
Table 32. Leading causes of fatal farm injuries to persons less than 20 years, Illinois, 1982-1996	34
Table 33. Leading causes of fatal farm injuries to persons less than 20 years, Indiana, 1982-1996	35
Table 34. Leading causes of fatal farm injuries to persons less than 20 years, Iowa, 1982-1996	35
Table 35. Leading causes of fatal farm injuries to persons less than 20 years, Kansas, 1982-1996	35
Table 36. Leading causes of fatal farm injuries to persons less than 20 years, Kentucky, 1982-1996	36
Table 37. Leading causes of fatal farm injuries to persons less than 20 years, Louisiana, 1982-1996	36
Table 38. Leading causes of fatal farm injuries to persons less than 20 years, Michigan, 1982-1996	36

Table 39. Leading causes of fatal farm injuries to persons less than 20 years, Minnesota, 1982-1996.....	37
Table 40. Leading causes of fatal farm injuries to persons less than 20 years, Mississippi, 1982-1996.....	37
Table 41. Leading causes of fatal farm injuries to persons less than 20 years, Missouri, 1982-1996.....	38
Table 42. Leading causes of fatal farm injuries to persons less than 20 years, Montana, 1982-1996.....	38
Table 43. Leading causes of fatal farm injuries to persons less than 20 years, Nebraska, 1982-1996.....	38
Table 44. Leading causes of fatal farm injuries to persons less than 20 years, New Mexico, 1982-1996.....	39
Table 45. Leading causes of fatal farm injuries to persons less than 20 years, New York, 1982-1996.....	39
Table 46. Leading causes of fatal farm injuries to persons less than 20 years, North Carolina, 1982-1996.....	39
Table 47. Leading causes of fatal farm injuries to persons less than 20 years, North Dakota, 1982-1996.....	40
Table 48. Leading causes of fatal farm injuries to persons less than 20 years, Ohio, 1982-1996.....	40
Table 49. Leading causes of fatal farm injuries to persons less than 20 years, Oklahoma, 1982-1996.....	40
Table 50. Leading causes of fatal farm injuries to persons less than 20 years, Oregon, 1982-1996.....	41
Table 51. Leading causes of fatal farm injuries to persons less than 20 years, Pennsylvania, 1982-1996.....	41
Table 52. Leading causes of fatal farm injuries to persons less than 20 years, South Carolina, 1982-1996.....	41
Table 53. Leading causes of fatal farm injuries to persons less than 20 years, South Dakota, 1982-1996.....	42
Table 54. Leading causes of fatal farm injuries to persons less than 20 years, Tennessee, 1982-1996.....	42

Table 55. Leading causes of fatal farm injuries to persons less than 20 years, Texas, 1982-1996	43
Table 56. Leading causes of fatal farm injuries to persons less than 20 years, Utah, 1982-1996	43
Table 57. Leading causes of fatal farm injuries to persons less than 20 years, Vermont, 1982-1996	43
Table 58. Leading causes of fatal farm injuries to persons less than 20 years, Virginia, 1982-1996	44
Table 59. Leading causes of fatal farm injuries to persons less than 20 years, Washington, 1982-1996	44
Table 60. Leading causes of fatal farm injuries to persons less than 20 years, West Virginia, 1982-1996	44
Table 61. Leading causes of fatal farm injuries to persons less than 20 years, Wisconsin, 1982-1996	45
Table 62. Leading causes of fatal farm injuries to persons less than 20 years, Wyoming, 1982-1996	45

List of Figures

Figure 1. Trend of fatal farm injuries to persons less than 20 years, by age group, United States, 1982-1996	13
Figure 2. Trend of the leading causes of fatal farm injuries to persons less than 20 years, United States, 1982-1996	15
Figure 3. Map of the United States showing Census regions, Census divisions, and states	19
Figure 4. Trend of the leading causes of fatal farm injuries to persons less than 20 years, Northeast Region, 1982-1996	21
Figure 5. Trend of the leading causes of fatal farm injuries to persons less than 20 years, Midwest Region, 1982-1996	22
Figure 6. Trend of the leading causes of fatal farm injuries to persons less than 20 years, South Region, 1982-1996	23
Figure 7. Trend of the leading causes of fatal farm injuries to persons less than 20 years, West Region, 1982-1996	24
Figure 8. Leading cause of fatal farm injuries to persons less than 20 years, by state, 1982-1996	27
Figure 9. Age group with the highest frequency of fatal farm injuries to persons less than 20 years, by state, 1982-1996	27

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Public Health Summary

What are the hazards?

According to data from the National Center for Health Statistics Mortality Data files, nearly 2,200 youth less than 20 years of age died of unintentional injuries (excluding transportation-related events) on farms in the United States between 1982 and 1996. Major causes of unintentional death on farms include farm machinery, drowning, and firearms. Together, these three causes accounted for 73% of the fatalities reported.

How can youth be exposed or put at risk?

Exposure to farm hazards is not limited to youth who are employed on farms. Youth can be fatally injured during work activities, while living on farms, while visiting farms, or when they accompany their working parents or adults into the fields. These various exposure sources make the farm a unique location for directing prevention strategies.

What recommendations has the federal government made to protect youth's health?

The Fair Labor Standards Act of 1938 (FLSA) and its amendments set standards for child labor in agriculture. However, FLSA covers only employees whose work involves production of agricultural goods which will leave the state through interstate commerce. While the FLSA specifically prohibits certain types of dangerous work (termed Hazardous Orders) by youth, these regulations do not apply to minors who are employed by their parents or a guardian on a farm owned or operated by their parent or a guardian.

Data that can be used to target injury prevention efforts are accumulating. NIOSH and other federal agencies encourage the use of these data to develop targeted prevention strategies. Additionally, NIOSH is conducting evaluations of prevention strategies to ensure that resources are applied effectively.

Where can more information be found?

New research efforts addressing childhood agricultural and farm injuries are underway at NIOSH and other organizations, and this information will be disseminated as soon as it becomes available. Additional information can be obtained through the NIOSH toll-free number or Website:

1-800-35-NIOSH
(800-356-4674)
www.cdc.gov/niosh

Fatal Unintentional Farm Injuries Among Persons Less Than 20 Years of Age in the United States:

Geographic Profiles

Introduction

Each year on farms in the United States, an alarming number of youth less than 20 years of age are killed, injured, or permanently disabled. Children's involvement on farms is unique because youth not only actively work from an early age, but live and play on farms. Children are exposed to safety hazards from farm machinery, livestock, agricultural chemicals, structures, and bodies of water. Electrical hazards and firearms may also be present on farms.

Twenty-seven percent of the 4.6 million farm residents in the United States are youth less than 20 years old.¹ Farm residents make up the largest population of youth exposed to farm safety hazards. However, relatives and friends of farm families, hired farm workers, or migrant workers may also be present on farms and exposed to similar hazards. Youth may also be involved in recreational activities on farms that expose them to safety hazards. Although the exact number of youth exposed to farm hazards annually is unknown, it has been estimated at more than two million.²

National data on fatal farm injuries occurring to youth and adolescents in the United States are limited. Data from the National Center for Health Statistics (NCHS) indicate that from 1979 through 1981, an average of 300 youth died on farms annually. Farm machines caused one-third of these deaths among youth less than 20 years old, and were responsible for half the deaths among youth under 10 years of age.³ A similar analysis for the years 1991 through 1993 demonstrates that fatal injuries on farms were reduced to 104 deaths annually, but the substantial contribution of farm machinery to these deaths did not change. Drowning incidents accounted for one-fourth of the total deaths, and one-third of the deaths among youth less than 5 years old.⁴

Few state-specific studies of fatal farm injuries of youth have been conducted.⁵⁻¹⁰ To prevent fatal farm injuries of youth in the United States, it is important to identify the leading causes of fatal injuries at the national level to guide broad-based prevention efforts. In addition, identifying the major causes of death at the regional and state level will guide efforts by state and community groups to address specific problems in their areas. Throughout the United States, geographic differences exist in agricultural populations, practices, and production. Additionally, exposure patterns differ among states, and also vary among population groups within the states. To date, regional and state-level data on childhood farm injuries in the United States have not been published. By addressing this gap, the data in this report may help policy makers, safety advocates, and the general public become more aware of major childhood farm safety issues in their states and regions, and may be useful to stakeholders as they develop prevention strategies specific to their needs.

Methodology

This document is a summary of fatal farm injuries to persons less than 20 years of age as reported in the National Center for Health Statistics (NCHS) Mortality Data from 1982 through 1996.¹¹ Fatal farm injuries are defined in this report as those which occurred on farms, regardless of production agriculture involvement. These injuries include those sustained during chores, paid work, or recreational activities such as hunting and swimming.

The NCHS Mortality Data were compiled from state death certificates filed from the Vital Statistics Offices in the United States. The edited data files included decedent demographics, geographic data, and information on the cause and physical location of death. Deaths to youth less than 20 years of age that occurred at a farm location were selected. NCHS data were coded according to the International Classification of Diseases codes (ICD-9)¹² for location and underlying external cause of death. ICD-9 codes ranging from E850 through E869 and E880 through E928 were the only E codes recorded in the data files. Intentional deaths (E950-E969) and transportation events (E800-E848) could not be identified in the data files because the ICD-9 guidelines excluded location of death for these events (cases were not coded, regardless of the location of death). However, because tractors are considered machinery, tractor-related deaths that occurred on the farm were included in this study. Events that occurred in the farm house or home premises of the farm were not identified as farm fatalities in the NCHS data files because the ICD-9 guidelines require they be classified as occurring at home. In addition, any fatalities that may have been misclassified in the original source document were excluded. Therefore, the number of farm fatalities reported in this document is considered conservative. The NCHS data do not distinguish between work and nonwork-related deaths, but include all fatalities on farms.

The Bureau of Census categorizes the nation into Census regions and Census divisions. NCHS data files follow this format. Specifically, there are four Census regions: West Region, Midwest Region, South Region, and the Northeast Region. Within the Census regions there are nine Census divisions: New England, Middle Atlantic, South Atlantic, East North Central, West North Central, East South Central, West South Central, Mountain, and Pacific. For the United States and Census regions, data are displayed in shade maps, tables, and figures by gender, age group, and cause of death. Additional tables summarize data for states and Census divisions. Individual cause-of-death profiles are provided, over the 15-year period, for states with at least ten deaths.

Lack of adequate state data on the number of youth exposed to farm hazards precludes assessment of risk and state-by-state comparisons. Therefore, the number of farm fatalities in this document for individual states should not be construed as a measure of risk.

Interpretation of Data

Caution should be exercised in interpreting the data presented in this document. The striking decreases in the frequency of farm fatalities among youth may be attributed to multiple factors, and do not necessarily reflect a similar reduction in risk. Changes in farm resident population, as well as improvements in equipment design, medical care, and educational programs may all have contributed to the decline in fatalities.

The farm-resident population has decreased steadily over the years, according to Bureau of Census reports (the farm resident population estimates were last published in 1991). According to these reports, between 1982 and 1991, the youth farm resident population decreased by 28%, for an average decrease of about 4% per year.^{1, 13-21} Statistics published by the United States Department of Agriculture (USDA) also indicated a decline in the number of farms and farm residents.²² Because the farm population has decreased, it is possible that smaller numbers of youth are exposed to farm hazards.

In addition to reductions in farm population, there has been an improvement in emergency medical and trauma care in rural areas.⁴ The use of safer farm machinery (e.g., tractors and other machines with rollover protective structures (ROPS) installed) has increased.^{4, 23} Educational campaigns directed at farming communities, such as the Farm Safety Day Camps, FFA, and the 4-H programs, have been well received²³ and more farm youth may be participating in farm machinery safety classes.²³

Data Summary

- Between 1982 and 1996, there were 2,174 farm deaths among youth less than 20 years of age.
- During 1982-1989, there were an average 181 deaths to youth on farms annually, decreasing to an average 103 deaths between 1990-1996. The average annual number of deaths decreased 43% between 1982-1989 and 1990-1996.
- About one out of every three farm deaths among youth occurred between the ages of 15 and 19.
- Males accounted for 85.2% of the fatal farm injuries to youth less than 20 years of age.
- Females accounted for more than 20% of deaths in the age groups 0-4 years and 5-9 years.
- Nearly 40% of the deaths among males were between the ages of 15 and 19, while nearly 40% of the deaths among females occurred before age 5.
- Farm machinery (including tractors), drowning, and firearm-related deaths represented 73% of fatal farm injuries to youth.
- Farm machinery-related deaths were the leading cause of death, accounting for 36% of deaths to youth less than 20. Thirty percent of farm machinery-related deaths were among children less than 5 years of age. Machinery was the leading cause of farm deaths in 29 states.
- The average annual number of farm machinery-related deaths decreased 60% between 1982-1989 and 1990-1996 among youth 15-19 years of age. The smallest decrease (33%) was among youth 5-9 years of age.
- Drowning was the second leading cause of death on farms (27%), with children less than 5 years of age accounting for 32% of the deaths. Drowning was the leading cause of farm deaths in 17 states.
- Between 1982-1989 and 1990-1996, the greatest decrease in the average annual number of drowning-related farm fatalities (64%) was among youth 10-14 years of age.
- Firearms accounted for 11% of the fatal farm injuries, with slightly more than half of the firearms deaths reported among youth 15-19 years of age (58%). Firearms were the leading cause of death in two states (Alabama and Wyoming).
- Between 1982-1989 and 1990-1996, the greatest decline in the average annual number of firearms-related farm fatalities (57%) was seen in youth 10-14 years of age. The decrease noted among youth 15-19 years of age between these time periods was 36%.
- For deaths attributed to machinery, drowning, and animals, the greatest numbers of deaths occurred among children under 5 years of age. The greatest numbers of deaths from mechanical suffocation occurred between ages 10 and 14, with firearms and electrocution deaths most common between ages 15 and 19.

- Two regions, the South Region and the Midwest Region, accounted for 79% of the fatal farm injuries.
- The greatest proportions of deaths in the Northeast Region and the West Region were among youth 0-4 years. In the Midwest Region and the South Region, the greatest proportions were among youth 15-19 years.
- The average annual number of fatal farm injuries among youth declined across all regions between 1982-1989 and 1990-1996. Among the regions, overall levels of decline varied, and were also inconsistent across age groups.
- In general, regional declines in machinery-related deaths were greatest among youth 15-19 years of age, and smallest among youth 5-9 years of age.
- Texas reported the most fatal injuries (204 deaths), representing 9.4% of the total.
- Five states reported 100 or more deaths each (Iowa, Missouri, Pennsylvania, Texas, and Wisconsin).
- Twenty-two states reported 40 or more farm deaths to youth during this period (Arkansas, California, Colorado, Georgia, Idaho, Indiana, Illinois, Iowa, Kansas, Kentucky, Missouri, Minnesota, Mississippi, Michigan, North Carolina, Ohio, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas, and Wisconsin).

Prevention of Childhood Farm Fatalities

In recent years, significant progress has been made in reducing farm injuries and fatalities.^{4, 23} Progress has been attributed to more widespread use of ROPS, improved emergency care in rural areas, certification of youth 14-15 years of age in the operation of farm machinery, and general educational efforts geared toward farm safety. However, despite progress made in recent years, the toll of farm fatalities among youth remains high. Further, as this document demonstrates, declines have not been uniformly strong in all geographic areas or age groups, or for all causes of death.

Strategies that have been suggested for prevention of childhood farm fatalities have several recurring themes: the importance of separating children from injury hazards; the need for adult supervision; and the need for adults present to take responsibility for assessing safety risks to children and youth and eliminating hazards. In general, prevention programs for specific types of injuries take each of these dimensions into account.

For example, strategies recommended for preventing deaths associated with farm machinery include providing enclosed play spaces for young children away from work areas; checking a work area for the presence and location of children before starting to operate any machinery; evaluating youth's maturity, knowledge, and physical abilities to operate machinery before assigning a chore or work task; and ensuring that youth adhere to standard safety practices such as using seat belts on ROPS-equipped tractors.⁹⁻¹⁰ Elements of a drowning prevention program may include erecting barriers to separate children from ponds or other drowning hazards; supervising children at all times when they are near a body of water; and permitting youth to swim only when another person is present.²⁴ A variety of agencies and organizations, including those listed in the section entitled "Additional Resources" on page 11, can provide further information about prevention of childhood injuries and fatalities on farms.

While numerous promising prevention strategies have been developed and implemented, few have been formally evaluated to date. NIOSH is actively pursuing such evaluations through its Childhood Agricultural Injury Prevention Initiative. Results of these rigorous evaluations will be invaluable in developing future interventions. However, at present, there is a critical need to use existing information to guide prevention efforts focused on farm fatalities among children and youth.

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Additional Resources

NOTE: *The addresses below were correct as of June, 2001. Since Internet addresses for Web sites change frequently, readers are cautioned that slight changes may have taken place since that time.*

Centers for Agricultural Disease and Injury Research, Education and Prevention
National Institute for Occupational Safety and Health
Phone: (304) 285-5749
www.cdc.gov/niosh/agctrhom.html

Farm Safety Program
Cooperative State Research Education and Extension Service
U.S. Department of Agriculture
Phone: (202) 401-0151
www.reeusda.gov/pas/AGSYS/FARMSAFE/Farmsafe.htm

Employment Standards Administration, Wage and Hour Division
U.S. Department of Labor
Phone: (866) 487-9243
www.dol.gov/dol/esa

Farm Safety 4 Just Kids
Phone: (800) 423-5437 or (515) 758-2827
www.fs4jk.org

National Center for Injury Prevention and Control
Phone: (770) 488-1506
www.cdc.gov/ncipc/ncipchm.htm

National Children's Center for Rural and Agricultural Health and Safety
Phone: (888) 924-SAFE (7233)
www.marshfieldclinic.org/research/children

National FFA Organization
Phone: (317) 802-6060
www.ffa.org

National Institute for Occupational Safety and Health
Phone: (800) 356-7674
www.cdc.gov/niosh

National SAFE KIDS Campaign
www.safekids.org

National Safety Council, Agriculture Division
www.nsc.org/mem/agri.htm

North American Guidelines for Children's Agricultural Tasks (NAGCAT)
Phone: (888) 924-SAFE (7233)
www.nagcat.org

Table 1. Fatal farm injuries to persons less than 20 years, by year and age group, United States, 1982-1996

Year	0 - 4 years	5 - 9 years	10 - 14 years	15 - 19 years	Total
1982	45	31	47	70	193
1983	51	38	65	97	251
1984	41	34	58	77	210
1985	59	38	37	76	210
1986	50	28	38	47	163
1987	40	30	36	46	152
1988	31	25	28	55	139
1989	30	35	26	41	132
1990	36	36	27	42	141
1991	29	25	21	29	104
1992	20	25	22	39	106
1993	29	13	26	33	101
1994	26	23	18	30	97
1995	20	17	16	28	81
1996	20	23	19	32	94
Total	527	421	484	742	2174

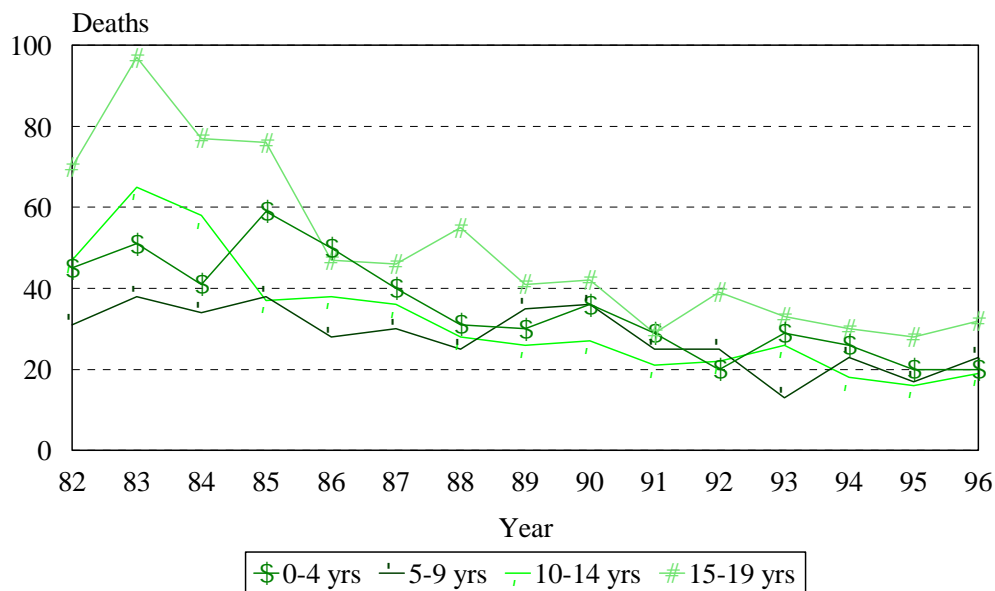


Figure 1. Trend of fatal farm injuries to persons less than 20 years, by age group, United States, 1982-1996 (N=2174)

Table 2. Fatal farm injuries to persons less than 20 years, by gender and age group, United States, 1982-1996

Age Group	Male	Female	Total
0-4 years	404	123	527
5-9 years	327	94	421
10-14 years	427	57	484
15-19 years	695	47	742
Total	1853	321	2174

Table 3. Percentage change in average annual number of fatal farm injuries to persons less than 20 years, by age group, United States, 1982-1989 and 1990-1996

All Causes of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
1982-1989	43	32	42	64	181
1990-1996	26	23	21	33	103
% change	-40	-28	-50	-48	-43

Table 4. Causes of fatal farm injuries to persons less than 20 years, United States, 1982-1996

Cause of Death	Number	Percent
Machinery (E919)	773	35.6
Drowning (E910)	585	26.9
Firearms (E922)	237	10.9
Struck by or against/caught in or between objects (E916-E918)	109	5.0
Mechanical suffocation (E911-E913)	107	4.9
Injury caused by animals (E905-E906)	82	3.7
Electric current (E925)	78	3.6
Falls (E880-E888)	69	3.2
Nature/environment (E900-E904, E907-E909)	43	2.0
Accidental poisoning (E850-E869)	23	1.1
Fire & flames (E890-E899)	22	1.0
All other causes (E920, E921, E923, E924, E928)	46	2.1
All causes of death (E850-E869 and E880-E928)	2174	100.0

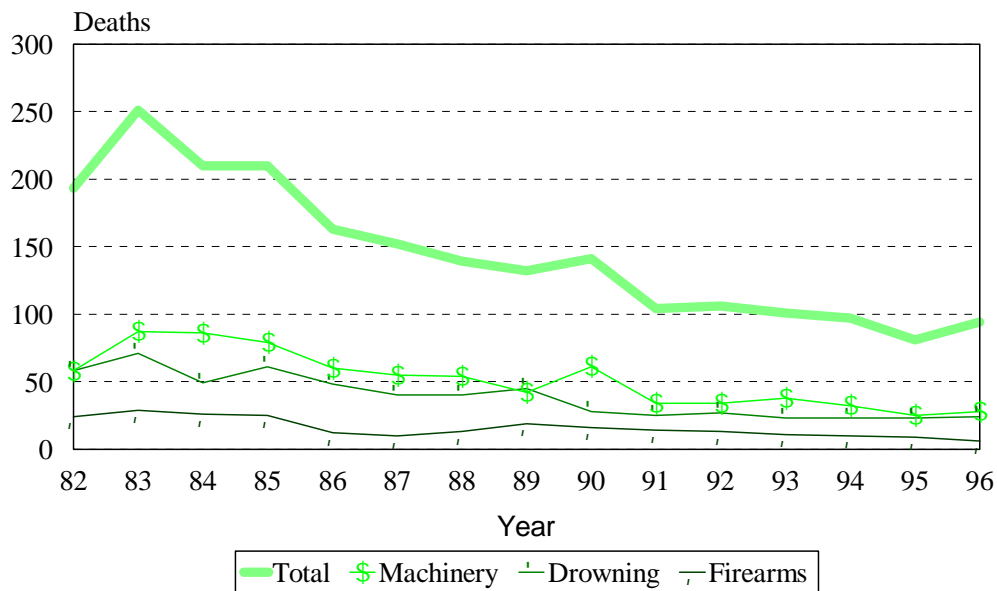


Figure 2. Trend of the leading causes of fatal farm injuries to persons less than 20 years, United States, 1982-1996

Table 5. Causes of fatal farm injuries to persons less than 20 years, by gender, United States, 1982-1996

Cause of Death	Male	Female	Total
Machinery (E919)	658	115	773
Drowning (E910)	500	85	585
Firearms (E922)	226	11	237
Struck by or against/caught in or between objects (E916-E918)	91	18	109
Mechanical suffocation (E911-E913)	100	7	107
Injury caused by animals (E905-E906)	50	32	82
Electric current (E925)	69	9	78
Falls (E880-E888)	55	14	69
Nature/environment (E900-E904, E907-E909)	31	12	43
Accidental poisoning (E850-E869)	17	6	23
Fire & flames (E890-E899)	16	6	22
All other causes (E920,E921,E923,E924,E928)	40	6	46
All causes of death (E850-E869 and E880-E928)	1853	321	2174

Table 6. Causes of fatal farm injuries to persons less than 20 years, by age group, United States, 1982-1996

Cause of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 - 19 years	Total
Machinery (E919)	229	188	141	215	773
Drowning (E910)	186	108	118	173	585
Firearms (E922)	9	15	76	137	237
Struck by or against/caught in or between objects (E916-E918)	30	29	22	28	109
Mechanical suffocation (E911-E913)	11	20	49	27	107
Injury caused by animals (E905-E906)	29	22	19	12	82
Electric current (E925)	4	4	20	50	78
Falls (E880-E888)	12	17	16	24	69
Nature/environment (E900-E904, E907-E909)	5	2	6	30	43
Accidental poisoning (E850-E869)	2	0	4	17	23
Fire & flames (E890-E899)	3	7	4	8	22
All other causes (E920, E921, E923, E924, E928)	7	9	9	21	46
All causes of death (E850-E869 and E880-E928)	527	421	484	742	2174

Table 7. Causes of fatal farm injuries to males less than 20 years, by age group, United States, 1982-1996

Cause of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 - 19 years	Total
Machinery (E919)	174	154	125	205	658
Drowning (E910)	149	82	101	168	500
Firearms (E922)	8	12	74	132	226
Mechanical suffocation (E911-E913)	10	16	47	27	100
Struck by or against/caught in or between objects (E916-E918)	23	21	19	28	91
Electric current (E925)	3	3	19	44	69
Falls (E880-E888)	9	12	14	20	55
Injury caused by animals (E905-E906)	17	14	9	10	50
Nature/environment (E900-E904, E907-E909)	1	1	5	24	31
Accidental poisoning (E850-E869)	2	0	4	11	17
Fire & flames (E890-E899)	2	5	2	7	16
All other causes (E920, E921, E923, E924, E928)	6	7	8	19	40
All causes of death (E850-E869 and E880-E928)	404	327	427	695	1853

Table 8. Causes of fatal farm injuries to females less than 20 years, by age group, United States, 1982-1996

Cause of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 - 19 years	Total
Machinery (E919)	55	34	16	10	115
Drowning (E910)	37	26	17	5	85
Injury caused by animals (E905-E906)	12	8	10	2	32
Struck by or against/caught in or between objects (E916-E918)	7	8	3	0	18
Falls (E880-E888)	3	5	2	4	14
Nature/environment (E900-E904, E907-E909)	4	1	1	6	12
Firearms (E922)	1	3	2	5	11
Electric current (E925)	1	1	1	6	9
Mechanical suffocation (E911-E913)	1	4	2	0	7
Accidental poisoning (E850-E869)	0	0	0	6	6
Fire & flames (E890-E899)	1	2	2	1	6
All other causes (E920, E921, E923, E924, E928)	1	2	1	2	6
All causes of death (E850-E869 and E880-E928)	123	94	57	47	321

Table 9. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery, drowning, and firearms, by age group, United States, 1982-1989 and 1990-1996

Cause of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
Machinery:					
1982-1989	19	15	12	20	65
1990-1996	11	10	7	8	36
% change	-42	-33	-42	-60	-45
Drowning:					
1982-1989	16	9	11	15	52
1990-1996	8	5	4	8	25
% change	-50	-44	-64	-47	-52
Firearms:					
1982-1989	<1	1	7	11	20
1990-1996	<1	<1	3	7	11
% change	--	--	-57	-36	-45

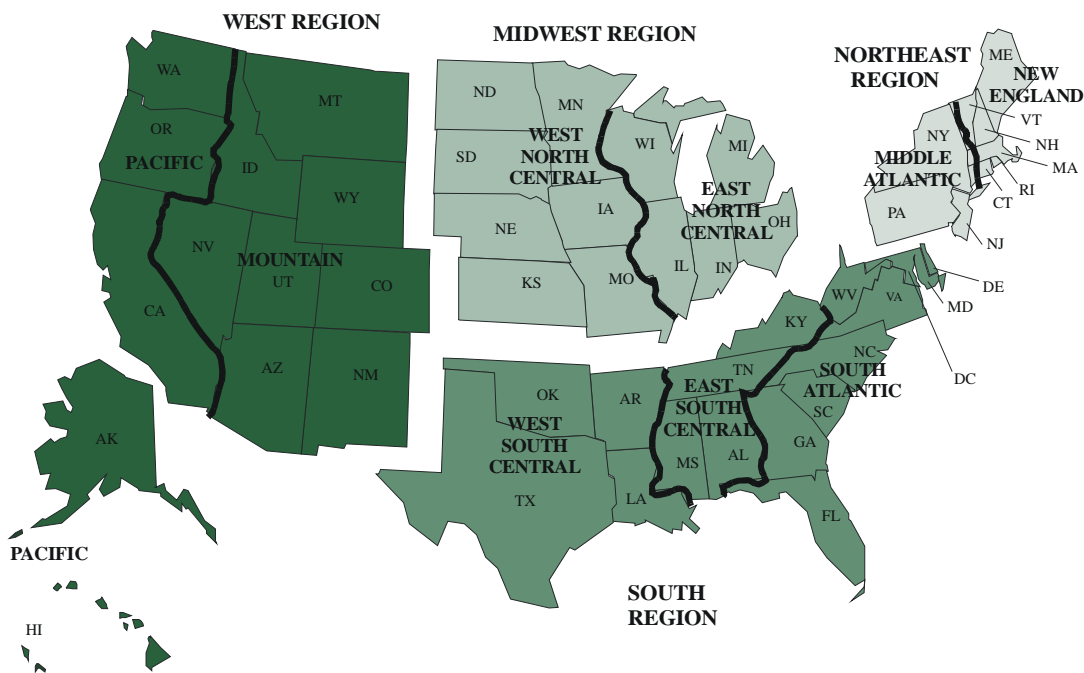


Figure 3. Map of the United States showing Census regions, Census divisions, and states

Table 10. Fatal farm injuries to persons less than 20 years, by Census region and age group, United States, 1982-1996

Region	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
Northeast	58	30	41	50	179
Midwest	228	178	168	270	844
South	147	162	217	337	863
West	94	51	58	85	288
Total	527	421	484	742	2174

Table 11. Percentage change in average annual number of fatal farm injuries to persons less than 20 years from all causes, by age group, Northeast Region, 1982-1989 and 1990-1996

All Causes of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
1982-1989	4	2	3	4	14
1990-1996	4	2	2	2	10
% change	--	--	-33	-50	-29

Table 12. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery, by age group, Northeast Region, 1982-1989 and 1990-1996

Cause of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
Machinery:					
1982-1989	2	1	1	2	6
1990-1996	2	1	1	<1	4
% change	--	--	--	--	-33

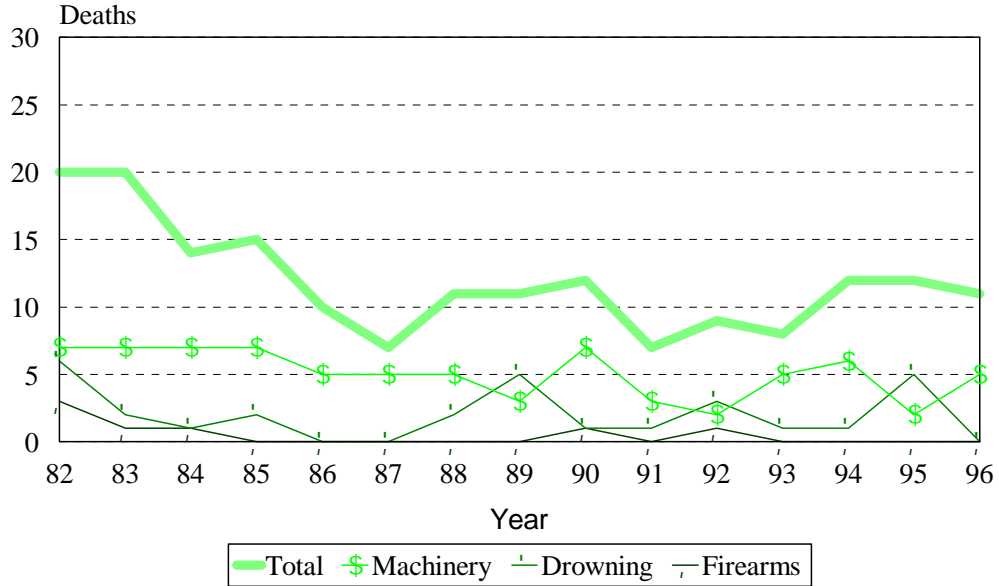


Figure 4. Trend of the leading causes of fatal farm injuries to persons less than 20 years, Northeast Region, 1982-1996 (N=179)

Table 13. Percentage change in average annual number of fatal farm injuries to persons less than 20 years from all causes, by age group, Midwest Region, 1982-1989 and 1990-1996

All Causes of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
1982-1989	19	13	14	23	69
1990-1996	10	10	8	12	41
% change	-47	-23	-43	-48	-41

Table 14. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery and drowning, by age group, Midwest Region, 1982-1989 and 1990-1996

Cause of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
Machinery:					
1982-1989	11	8	5	6	30
1990-1996	6	6	3	3	17
% change	-45	-25	-40	-50	-43
Drowning:					
1982-1989	5	2	2	4	13
1990-1996	3	1	<1	2	7
% change	-40	-50	--	-50	-46

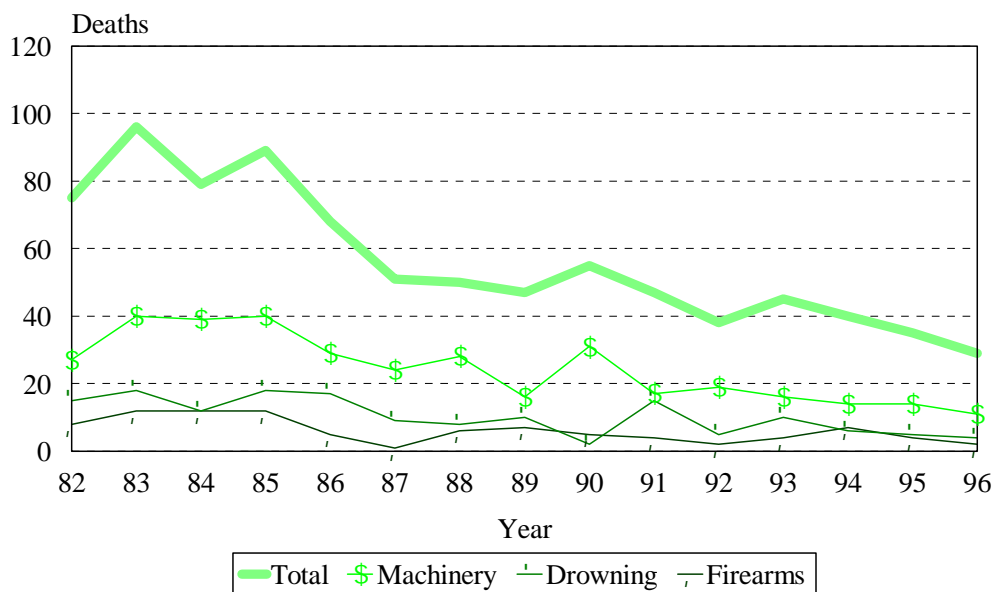


Figure 5. Trend of the leading causes of fatal farm injuries to persons less than 20 years, Midwest Region, 1982-1996 (N=864)

Table 15. Percentage change in average annual number of fatal farm injuries to persons less than 20 years from all causes, by age group, South Region, 1982-1989 and 1990-1996

All Causes of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
1982-1989	12	13	20	30	75
1990-1996	7	8	8	14	38
% change	-42	-38	-60	-53	-49

Table 16. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery and drowning, by age group, South Region, 1982-1989 and 1990-1996

Cause of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
Machinery:					
1982-1989	4	4	3	9	21
1990-1996	2	3	2	2	9
% change	-50	-25	-50	-78	-57
Drowning:					
1982-1989	6	6	9	10	30
1990-1996	3	2	3	5	14
% change	-50	-67	-67	-50	-53

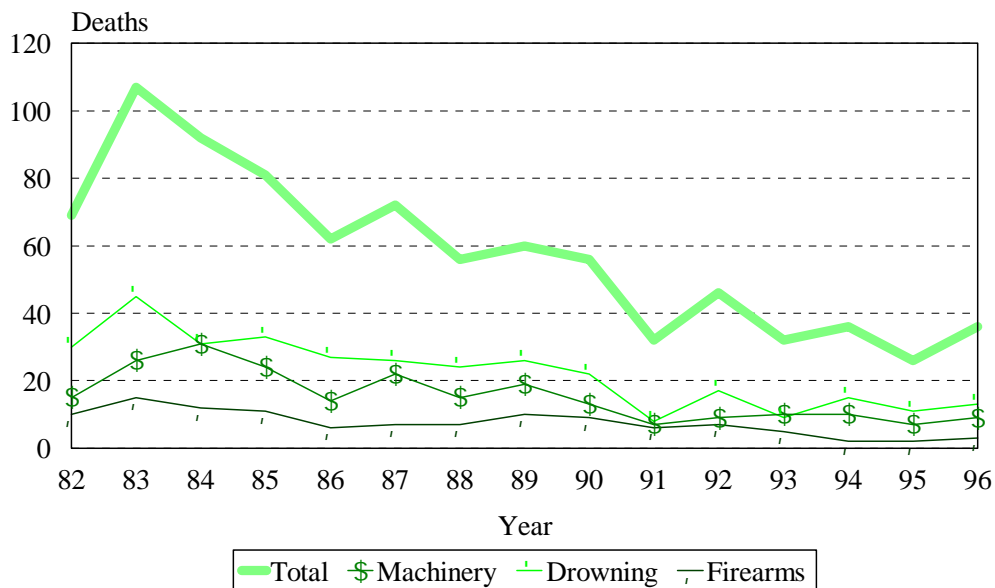


Figure 6. Trend of the leading causes of fatal farm injuries to persons less than 20 years, South Region, 1982-1996 (N=863)

Table 17. Percentage change in average annual number of fatal farm injuries to persons less than 20 years from all causes, by age group, West Region, 1982-1989 and 1990-1996

All Causes of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
1982-1989	8	4	5	7	24
1990-1996	5	3	3	4	14
% change	-38	-25	-40	-43	-42

Table 18. Percentage change in average annual number of fatal farm injuries to persons less than 20 years due to machinery, by age group, West Region, 1982-1989 and 1990-1996

Cause of Death	0 - 4 years	5 - 9 years	10 - 14 years	15 -19 years	Total
Machinery:					
1982-1989	2	2	2	3	8
1990-1996	1	1	1	2	5
% change	-50	-50	-50	-33	-38

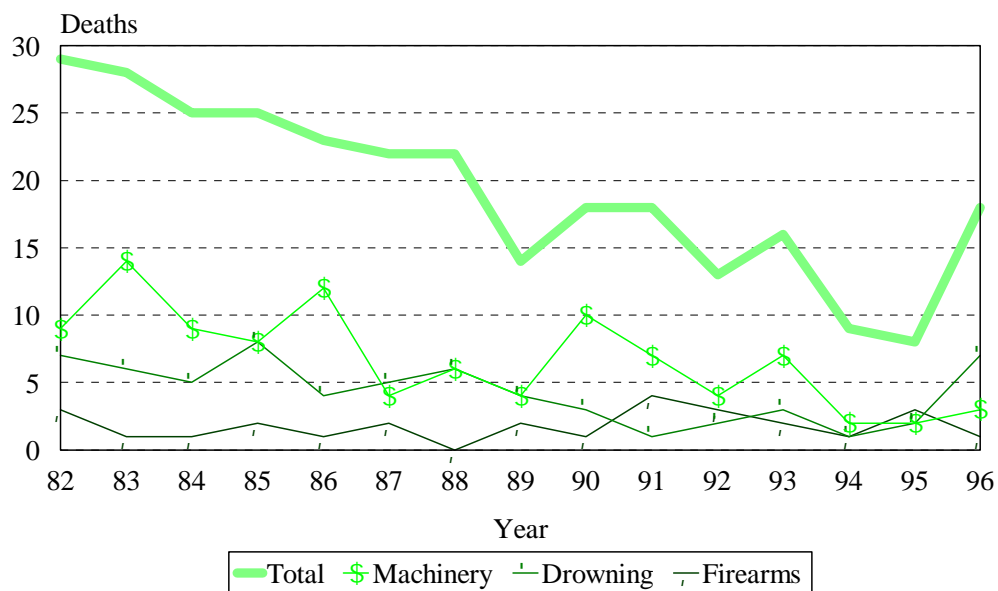


Figure 7. Trend of the leading causes of fatal farm injuries to persons less than 20 years, West Region, 1982-1996 (N=288)

Table 19. Fatal farm injuries to persons less than 20 years, by Census division and gender, United States, 1982-1996

Census Division		Male	Female	Total
Northeast:	New England	14	11	25
	Middle Atlantic	124	30	154
Midwest:	East North Central	344	46	390
	West North Central	381	73	454
South:	South Atlantic	262	32	294
	East South Central	194	28	222
	West South Central	292	55	347
West:	Mountain	154	29	183
	Pacific	88	17	105
Total		1853	321	2174

Table 20. Fatal farm injuries to persons less than 20 years, by age group and Census division, United States, 1982-1996

Census Division	0 - 4 years	5 - 9 years	10 -14 years	15 -19 years	Total
New England	7	4	4	10	25
Middle Atlantic	51	26	37	40	154
East North Central	102	85	74	129	390
West North Central	126	93	94	141	454
South Atlantic	43	54	83	114	294
East South Central	29	40	57	96	222
West South Central	75	68	77	127	347
Mountain	67	34	39	43	183
Pacific	27	17	19	42	105
Total	527	421	484	742	2174

Table 21. Causes of fatal farm injuries to persons less than 20 years, by Census division, United States, 1982-1996

Cause of Death	New England	Middle Atlantic	East North Central	West North Central	South Atlantic
Machinery (E919)	9	67	183	182	88
Drowning (E910)	5	25	62	92	112
Firearms (E922)	0	7	38	53	32
Mechanical suffocation (E911-E913)	2	10	25	32	11
Struck by or against/caught in or between objects (E916-E918)	0	7	25	26	13
Injury caused by animals (E905-E906)	0	8	10	12	9
Electric current (E925)	2	4	13	17	6
Falls (E880-E888)	1	16	11	8	9
All other causes (E850-E869, E890-E899, E900-E904, E907-E909, E920-E924, E928)	3	8	23	32	12
All causes of death (E850-E869 and E880- E928)	25	154	390	454	294

Table 21 (Continued). Causes of fatal farm injuries to persons less than 20 years, by Census division, United States, 1982-1996

Cause of Death	South Central	West South Central	Mountain	Pacific	Total
Machinery (E919)	58	85	55	46	773
Drowning (E910)	93	132	44	20	585
Firearms (E922)	33	47	21	6	237
Mechanical suffocation (E911-E913)	5	11	7	4	107
Struck by or against/caught in or between objects (E916-E918)	10	8	13	7	109
Injury caused by animals (E905-E906)	4	20	14	5	82
Electric current (E925)	3	18	9	6	78
Falls (E880-E888)	6	3	10	5	69
All other causes (E850-E869, E890-E899, E900-E904, E907-E909, E920-E924, E928)	6	21	9	6	134
All causes of death (E850-E869 and E880- E928)	222	347	183	105	2174

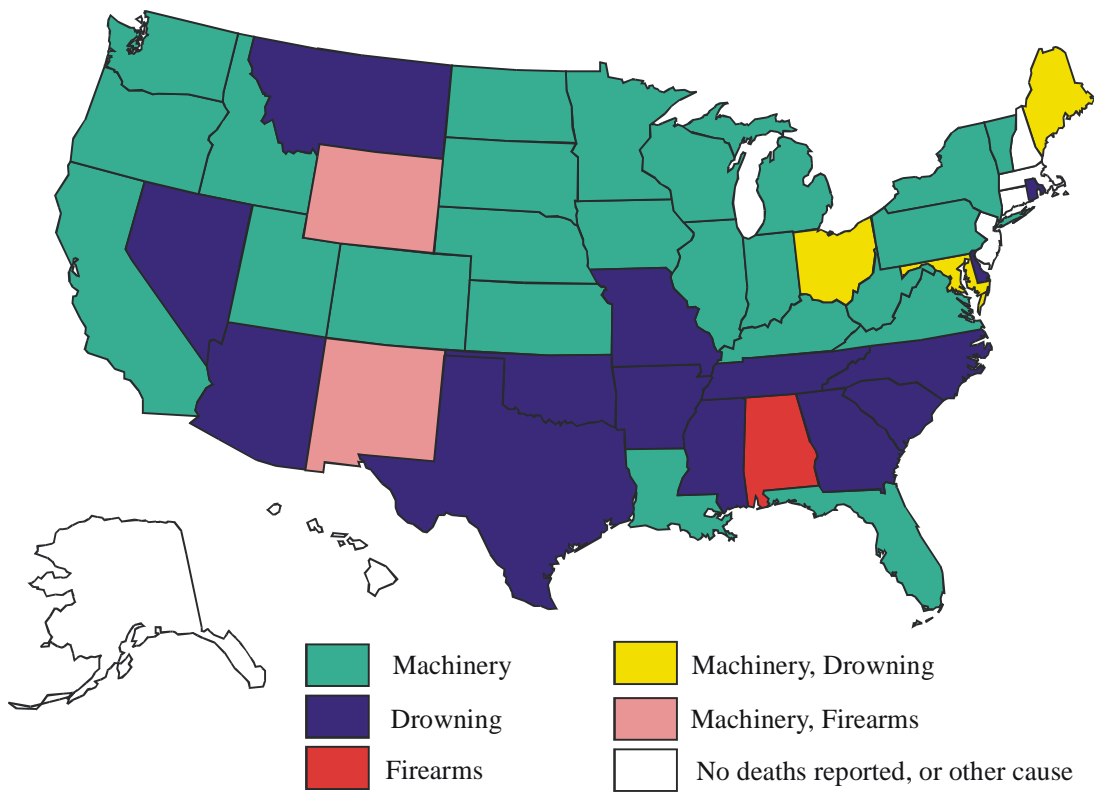


Figure 8. Leading cause of fatal farm injuries to persons less than 20 years, by state, 1982-1996

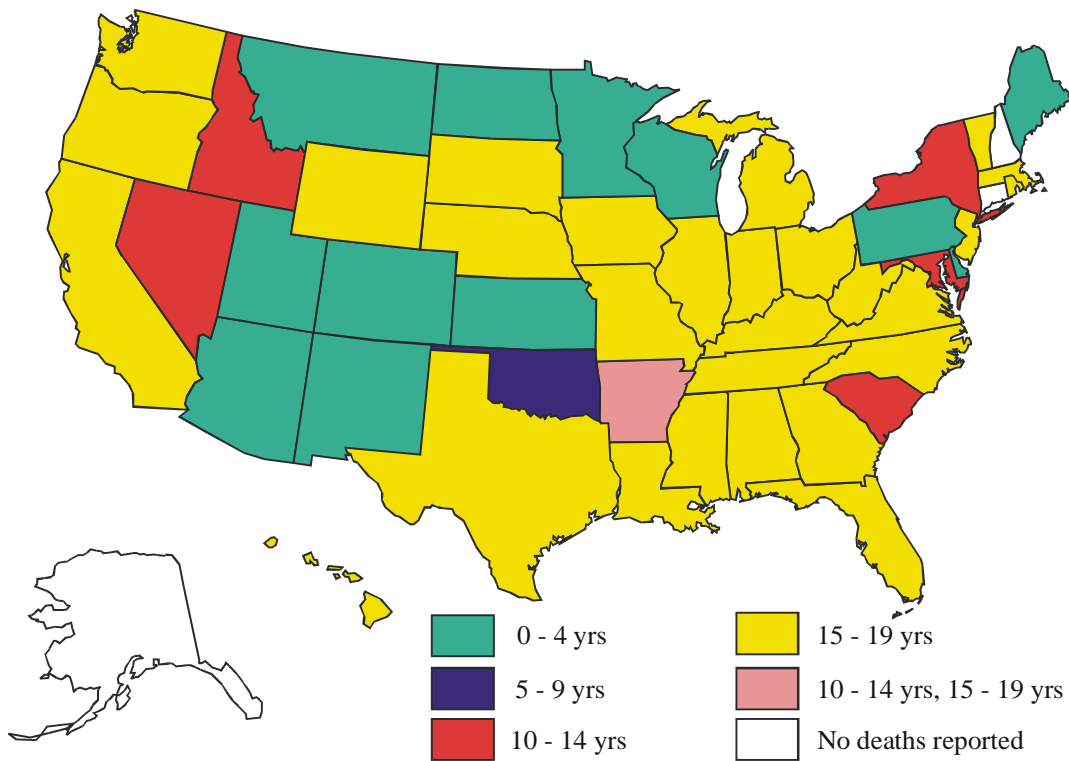


Figure 9. Age group with the highest frequency of fatal farm injuries to persons less than 20 years, by state, 1982-1996

Table 22. Fatal farm injuries to persons less than 20 years, by age group and state, 1982-1996

State	0 - 4 years	5 - 9 years	10 -14 years	15 -19 years	Total
Alabama	8	1	3	13	25
Alaska	0	0	0	0	0
Arizona	5	2	3	3	13
Arkansas	8	10	17	17	52
California	10	7	8	17	42
Colorado	16	7	8	11	42
Connecticut	0	0	0	0	0
Delaware	1	0	0	0	1
DC	0	1	0	2	3
Florida	6	5	4	10	25
Georgia	13	13	19	32	77
Hawaii	0	0	0	1	1
Idaho	12	13	14	5	44
Illinois	17	17	14	27	75
Indiana	16	22	17	23	78
Iowa	25	22	27	33	107
Kansas	20	10	9	11	50
Kentucky	12	16	17	39	84
Louisiana	2	3	5	15	25
Maine	3	2	2	2	9
Maryland	0	2	4	2	8
Massachusetts	0	0	1	2	3
Michigan	22	11	17	23	73
Minnesota	25	17	21	14	77
Mississippi	6	10	27	29	72
Missouri	25	21	19	41	106
Montana	9	5	7	6	27

Table 22 (Continued). Fatal farm injuries to persons less than 20 years, by age group and state, 1982-1996

State	0 - 4 years	5 - 9 years	10 -14 years	15 -19 years	Total
Nebraska	10	7	7	13	37
Nevada	1	1	2	1	5
New Hampshire	0	0	0	0	0
New Jersey	1	0	0	5	6
New Mexico	6	2	1	2	11
New York	7	10	13	9	39
North Carolina	14	15	26	36	91
North Dakota	8	3	3	5	19
Ohio	8	10	11	30	59
Oklahoma	18	19	13	16	66
Oregon	11	6	6	15	38
Pennsylvania	43	16	24	26	109
Rhode Island	0	0	0	1	1
South Carolina	2	5	17	13	37
South Dakota	13	13	8	24	58
Tennessee	3	13	10	15	41
Texas	47	36	42	79	204
Utah	11	2	3	6	22
Vermont	4	2	1	5	12
Virginia	4	9	10	11	34
Washington	6	4	5	9	24
West Virginia	3	4	3	8	18
Wisconsin	39	25	15	26	105
Wyoming	7	2	1	9	19

Table 23. Fatal farm injuries to persons less than 20 years of age,
by cause and state, 1982-1996

State	Machinery	Drowning	Firearms	All other	Total
Alabama	6	5	7	7	25
Alaska	0	0	0	0	0
Arizona	1	6	1	5	13
Arkansas	13	20	4	15	52
California	16	6	2	18	42
Colorado	11	8	3	20	42
Connecticut	0	0	0	0	0
Delaware	0	1	0	0	1
DC	0	0	0	3	3
Florida	12	2	2	9	25
Georgia	19	31	10	17	77
Hawaii	0	0	0	1	1
Idaho	22	11	4	7	44
Illinois	27	16	2	30	75
Indiana	34	17	11	16	78
Iowa	50	15	14	28	107
Kansas	20	15	5	10	50
Kentucky	34	22	11	17	84
Louisiana	13	7	1	4	25
Maine	3	3	0	3	9
Maryland	2	2	0	4	8
Massachusetts	0	0	0	3	3
Michigan	34	7	9	23	73
Minnesota	37	6	9	25	77
Mississippi	6	49	9	8	72
Missouri	29	39	14	24	106
Montana	5	7	3	12	27

Table 23 (Continued). Fatal farm injuries to persons less than 20 years of age, by cause and state, 1982-1996

State	Machinery	Drowning	Firearms	All other	Total
Nebraska	15	2	3	17	37
Nevada	0	3	1	1	5
New Hampshire	0	0	0	0	0
New Jersey	0	0	0	6	6
New Mexico	3	2	3	3	11
New York	20	5	2	12	39
North Carolina	24	36	8	23	91
North Dakota	6	5	2	6	19
Ohio	17	17	8	17	59
Oklahoma	15	32	4	15	66
Oregon	15	10	4	9	38
Pennsylvania	47	20	5	37	109
Rhode Island	0	1	0	0	1
South Carolina	5	26	4	2	37
South Dakota	25	10	6	17	58
Tennessee	12	17	6	6	41
Texas	44	73	38	49	204
Utah	7	4	0	11	22
Vermont	6	1	0	5	12
Virginia	15	10	5	4	34
Washington	15	4	0	5	24
West Virginia	11	4	3	0	18
Wisconsin	71	5	8	21	105
Wyoming	6	3	6	4	19

Table 24. Leading causes of fatal farm injuries to persons less than 20 years, Alabama, 1982-1996

Cause of Death	Frequency	Percent
Firearms (E922)	7	28
Machinery (E919)	6	24
Drowning (E910)	5	20
Electric current (E925)	3	12
All other causes (E888, E906, E909)	4	16
All causes of death (E850-E869 and E880-E928)	25	100

Table 25. Leading causes of fatal farm injuries to persons less than 20 years, Arizona, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	6	46
Injury caused by animals (E905-E906)	2	15
Electric current (E925)	2	15
All other causes (E919, E922, E928)	3	23
All causes of death (E850-E869 and E880-E928)	13	100

Table 26. Leading causes of fatal farm injuries to persons less than 20 years, Arkansas, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	20	38
Machinery (E919)	13	25
Firearms (E922)	4	7
Injury caused by animals (E905-E906)	3	6
Mechanical suffocation (E911-E913)	3	6
Struck by or against/caught in or between objects (E916-E918)	3	6
Electric current (E925)	3	6
All other causes (E866, E891, E907, E928)	3	6
All causes of death (E850-E869 and E880-E928)	52	100

Table 27. Leading causes of fatal farm injuries to persons less than 20 years, California, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	16	38
Drowning (E910)	6	14
Mechanical suffocation (E911-E913)	4	10
Struck by or against/caught in or between objects (E916-E918)	4	10
Electric current (E925)	4	10
All other causes (E854, E868, E888, E891, E906, E922, E928)	8	18
All causes of death (E850-E869 and E880-E928)	42	100

Table 28. Leading causes of fatal farm injuries to persons less than 20 years, Colorado, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	11	26
Drowning (E910)	8	19
Falls (E880-E888)	5	12
Struck by or against/caught in or between objects (E916-E918)	4	9
Injury caused by animals (E905-E906)	4	9
Firearms (E922)	3	7
All other causes (E892, E901, E907, E913, E925)	7	18
All causes of death (E850-E869 and E880-E928)	42	100

Table 29. Leading causes of fatal farm injuries to persons less than 20 years, Florida, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	12	48
Injury caused by animals (E905-E906)	4	16
Drowning (E910)	2	8
Firearms (E922)	2	8
All other causes (E888, E891, E913, E918, E925)	5	20
All causes of death (E850-E869 and E880-E928)	25	100

Table 30. Leading causes of fatal farm injuries to persons less than 20 years, Georgia, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	31	40
Machinery (E919)	19	25
Firearms (E922)	10	13
Mechanical suffocation (E911-E913)	4	5
Falls (E880-E888)	3	4
Struck by or against/caught in or between objects (E916-E918)	3	4
All other causes (E868, E891, E896, E906, E925)	7	9
All causes of death (E850-E869 and E880-E928)	77	100

Table 31. Leading causes of fatal farm injuries to persons less than 20 years, Idaho, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	22	50
Drowning (E910)	11	25
Firearms (E922)	4	9
All other causes (E892, E906, E913, E916, E918, E925)	7	16
All causes of death (E850-E869 and E880-E928)	44	100

Table 32. Leading causes of fatal farm injuries to persons less than 20 years, Illinois, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	27	36
Drowning (E910)	16	21
Mechanical suffocation (E911-E913)	9	12
Struck by or against/caught in or between objects (E916-E918)	5	7
Accidental poisoning (E850-E869)	4	5
Falls (E880-E888)	4	5
Electric current (E925)	4	5
All other causes (E906, E921, E922, E928)	6	9
All causes of death (E850-E869 and E880-E928)	75	100

Table 33. Leading causes of fatal farm injuries to persons less than 20 years, Indiana, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	34	44
Drowning (E910)	17	22
Firearms (E922)	11	14
Struck by or against/caught in or between objects (E916-E918)	6	8
Mechanical suffocation (E911-E913)	5	6
All other causes (E868, E906, E925)	5	6
All causes of death (E850-E869 and E880-E928)	78	100

Table 34. Leading causes of fatal farm injuries to persons less than 20 years, Iowa, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	50	47
Drowning (E910)	15	14
Mechanical suffocation (E911-E913)	14	13
Firearms (E922)	14	13
Struck by or against/caught in or between objects (E916-E918)	4	4
All other causes (E884, E894, E901, E906, E908, E924, E925, E928)	10	9
All causes of death (E850-E869 and E880-E928)	107	100

Table 35. Leading causes of fatal farm injuries to persons less than 20 years, Kansas, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	20	40
Drowning (E910)	15	30
Firearms (E922)	5	10
Struck by or against/caught in or between objects (E916-E918)	3	6
Electric current (E925)	3	6
All other causes (E884, E888, E912, E920, E928)	4	8
All causes of death (E850-E869 and E880-E928)	50	100

Table 36. Leading causes of fatal farm injuries to persons less than 20 years, Kentucky, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	34	40
Drowning (E910)	22	26
Firearms (E922)	11	13
Struck by or against/caught in or between objects (E916-E918)	5	6
Explosive material (E923)	4	5
Mechanical suffocation (E911-E913)	3	4
All other causes (E888, E894, E906, E920, E928)	5	6
All causes of death (E850-E869 and E880-E928)	84	100

Table 37. Leading causes of fatal farm injuries to persons less than 20 years, Louisiana, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	13	52
Drowning (E910)	7	28
All other causes (E888, E906, E922, E925)	5	20
All causes of death (E850-E869 and E880-E928)	25	100

Table 38. Leading causes of fatal farm injuries to persons less than 20 years, Michigan, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	34	47
Firearms (E922)	9	12
Drowning (E910)	7	10
Nature/environment (E900-E904, E907-E909)	4	5
Mechanical suffocation (E911-E913)	4	5
Struck by or against/caught in or between objects (E916-E918)	4	5
Injury caused by animals (E905-E906)	3	4
Electric current (E925)	3	4
All other causes (E862, E883, E884, E891)	5	7
All causes of death (E850-E869 and E880-E928)	73	100

Table 39. Leading causes of fatal farm injuries to persons less than 20 years, Minnesota, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	37	48
Firearms (E922)	9	12
Mechanical suffocation (E911-E913)	7	9
Drowning (E910)	6	8
Nature/environment (E900-E904, E907-E909)	4	5
Struck by or against/caught in or between objects (E916-E918)	4	5
Electric current (E925)	4	5
Injury caused by animals (E905-E906)	3	4
All other causes (E864, E920, E925, E928)	3	4
All causes of death (E850-E869 and E880-E928)	77	100

Table 40. Leading causes of fatal farm injuries to persons less than 20 years, Mississippi, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	49	68
Firearms (E922)	9	13
Machinery (E919)	6	8
Struck by or against/caught in or between objects (E916-E918)	3	4
All other causes (E868, E883, E884, E906, E913, E928)	5	7
All causes of death (E850-E869 and E880-E928)	72	100

Table 41. Leading causes of fatal farm injuries to persons less than 20 years, Missouri, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	39	37
Machinery (E919)	29	27
Firearms (E922)	14	13
Nature/environment (E900-E904, E907-E909)	5	5
Injury caused by animals (E905-E906)	5	5
Mechanical suffocation (E911-E913)	5	5
Falls (E880-E888)	4	4
All other causes (E891, E916, E925)	5	5
All causes of death (E850-E869 and E880-E928)	106	100

Table 42. Leading causes of fatal farm injuries to persons less than 20 years, Montana, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	7	26
Machinery (E919)	5	19
Struck by or against/caught in or between objects (E916-E918)	3	11
Firearms (E922)	3	11
All other causes (E888, E906, E909, E913, E925)	9	33
All causes of death (E850-E869 and E880-E928)	27	100

Table 43. Leading causes of fatal farm injuries to persons less than 20 years, Nebraska, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	15	41
Struck by or against/caught in or between objects (E916-E918)	7	19
Electric current (E925)	4	11
Firearms (E922)	3	8
All other causes (E888, E906, E909, E910, E913, E928)	8	21
All causes of death (E850-E869 and E880-E928)	37	100

Table 44. Leading causes of fatal farm injuries to persons less than 20 years,
New Mexico, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	3	27
Firearms (E922)	3	27
All other causes (E888, E906, E909, E910)	5	46
All causes of death (E850-E869 and E880-E928)	11	100

Table 45. Leading causes of fatal farm injuries to persons less than 20 years,
New York, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	20	51
Drowning (E910)	5	13
Injury caused by animals (E905-E906)	3	8
Struck by or against/caught in or between objects (E916-E918)	2	5
Firearms (E922)	2	5
Electric current (E925)	2	5
All other causes (E869, E888, E891, E913)	5	13
All causes of death (E850-E869 and E880-E928)	39	100

Table 46. Leading causes of fatal farm injuries to persons less than 20 years,
North Carolina, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	36	40
Machinery (E919)	24	26
Firearms (E922)	8	9
Mechanical suffocation (E911-E913)	5	6
Struck by or against/caught in or between objects (E916-E918)	5	6
Electric current (E925)	3	3
All other causes (E863, E884, E888, E906, E907)	10	10
All causes of death (E850-E869 and E880-E928)	91	100

Table 47. Leading causes of fatal farm injuries to persons less than 20 years,
North Dakota, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	6	31
Drowning (E910)	5	26
Struck by or against/caught in or between objects (E916-E918)	3	16
All other causes (E909, E913, E922)	5	26
All causes of death (E850-E869 and E880-E928)	19	100

Table 48. Leading causes of fatal farm injuries to persons less than 20 years,
Ohio, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	17	29
Machinery (E919)	17	29
Firearms (E922)	8	14
Struck by or against/caught in or between objects (E916-E918)	5	8
Electric current (E925)	3	5
All other causes (E862, E888, E892, E906, E909, E913, E928)	9	15
All causes of death (E850-E869 and E880-E928)	59	100

Table 49. Leading causes of fatal farm injuries to persons less than 20 years,
Oklahoma, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	32	48
Machinery (E919)	15	23
Injury caused by animals (E905-E906)	6	9
Firearms (E922)	4	6
All other causes (E899, E913, E917, E925, E928)	9	14
All causes of death (E850-E869 and E880-E928)	66	100

Table 50. Leading causes of fatal farm injuries to persons less than 20 years, Oregon, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	15	39
Drowning (E910)	10	26
Firearms (E922)	4	11
Struck by or against/caught in or between objects (E916-E918)	3	8
All other causes (E869, E888, E906, E925, E928)	6	16
All causes of death (E850-E869 and E880-E928)	38	100

Table 51. Leading causes of fatal farm injuries to persons less than 20 years, Pennsylvania, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	47	43
Drowning (E910)	20	18
Falls (E880-E888)	13	12
Mechanical suffocation (E911-E913)	8	7
Struck by or against/caught in or between objects (E916-E918)	5	5
Firearms (E922)	5	5
Accidental poisoning (E850-E869)	3	3
Injury caused by animals (E905-E906)	3	3
All other causes (E923, E925, E928)	5	5
All causes of death (E850-E869 and E880-E928)	109	100

Table 52. Leading causes of fatal farm injuries to persons less than 20 years, South Carolina, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	26	70
Machinery (E919)	5	14
Firearms (E922)	4	11
All other causes (E909, E928)	2	5
All causes of death (E850-E869 and E880-E928)	37	100

Table 53. Leading causes of fatal farm injuries to persons less than 20 years, South Dakota, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	25	43
Drowning (E910)	10	17
Firearms (E922)	6	10
Nature/environment (E900-E904, E907-E909)	3	5
Mechanical suffocation (E911-E913)	3	5
Struck by or against/caught in or between objects (E916-E918)	3	5
All other causes (E860, E869, E906, E920, E925, E928)	8	14
All causes of death (E850-E869 and E880-E928)	58	100

Table 54. Leading causes of fatal farm injuries to persons less than 20 years, Tennessee, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	17	41
Machinery (E919)	12	29
Firearms (E922)	6	15
All other causes (E884, E887, E891, E913, E916, E917, E928)	6	15
All causes of death (E850-E869 and E880-E928)	41	100

Table 55. Leading causes of fatal farm injuries to persons less than 20 years, Texas, 1982-1996

Cause of Death	Frequency	Percent
Drowning (E910)	73	36
Machinery (E919)	44	22
Firearms (E922)	38	19
Electric current (E925)	12	6
Injury caused by animals (E905-E906)	9	4
Nature/environment (E900-E904, E907-E909)	7	3
Mechanical suffocation (E911-E913)	6	3
Struck by or against/caught in or between objects (E916-E918)	4	2
Fire & flames (E890-E899)	3	1
All other causes (E862, E882, E888, E921, E923, E928)	8	4
All causes of death (E850-E869 and E880-E928)	204	100

Table 56. Leading causes of fatal farm injuries to persons less than 20 years, Utah, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	7	32
Drowning (E910)	4	18
All other causes (E888, E906, E909, E913, E918, E925)	11	50
All causes of death (E850-E869 and E880-E928)	22	100

Table 57. Leading causes of fatal farm injuries to persons less than 20 years, Vermont, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	6	50
Drowning (E910)	1	8
All other causes (E909, E913, E925, E928)	5	42
All causes of death (E850-E869 and E880-E928)	12	100

Table 58. Leading causes of fatal farm injuries to persons less than 20 years, Virginia, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	15	44
Drowning (E910)	10	29
Firearms (E922)	5	15
Struck by or against/caught in or between objects (E916-E918)	3	9
Mechanical suffocation (E911-E913)	1	3
All causes of death (E850-E869 and E880-E928)	34	100

Table 59. Leading causes of fatal farm injuries to persons less than 20 years, Washington, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	15	63
Drowning (E910)	4	17
Injury by animals (E905-E906)	3	12
Falls (E880-E888)	2	8
All causes of death (E850-E869 and E880-E928)	24	100

Table 60. Leading causes of fatal farm injuries to persons less than 20 years, West Virginia, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	11	61
Drowning (E910)	4	22
Firearms (E922)	3	17
All causes of death (E850-E869 and E880-E928)	18	100

Table 61. Leading causes of fatal farm injuries to persons less than 20 years,
Wisconsin, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	71	67
Firearms (E922)	8	7
Mechanical suffocation (E911-E913)	6	6
Drowning (E910)	5	5
Struck by or against/caught in or between objects (E916-E918)	5	5
Falls (E880-E888)	4	4
All other causes (E906, E920, E923, E925)	6	6
All causes of death (E850-E869 and E880-E928)	105	100

Table 62. Leading causes of fatal farm injuries to persons less than 20 years,
Wyoming, 1982-1996

Cause of Death	Frequency	Percent
Machinery (E919)	6	31
Firearms (E922)	6	31
Drowning (E910)	3	16
All other causes (E906, E918, E925)	4	21
All causes of death (E850-E869 and E880-E928)	19	100

Appendix

Classification of External Causes of Unintentional Deaths*

Cause of Death	E-code
Poisoning	850-869
Falls	880-888
Fire & flames	890-899
Nature/environment	900-904, 907-909
Injury caused by animals	905-906
Drowning	910
Mechanical suffocation	911-913
Struck by or against/caught in or between objects	916-918
Machinery	919
Cutting and piercing instruments or objects	920
Explosion of pressure vessel	921
Firearms	922
Explosive material	923
Hot substance or object, caustic or corrosive material and steam	924
Electric current	925
Other unspecified causes, e.g., noise, vibration, etc.	928

*International Classification of Diseases, 9th Revision.