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# Injuries Among Youth on Farms in the United States 1998

Department of Health and Human Services  
Centers for Disease Control and Prevention  
National Institute for Occupational Safety and Health



# **Injuries Among Youth on Farms in the United States, 1998**

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**DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention  
National Institute for Occupational Safety and Health**

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## Public Health Summary

### **What are the hazards?**

According to data from the National Institute for Occupational Safety and Health and the U.S. Department of Agriculture, approximately 33,000 youth less than 20 years of age were injured on farms in the United States in 1998. Major causes of these injuries included falls, animals, and off-road vehicles such as all-terrain vehicles and tractors. This estimate should be considered a conservative figure due to the potential for recall bias and the under reporting of hired workers.

### **How can a youth be exposed or put at risk?**

Exposures to farm hazards are not limited to youth who work on farms. Youth may sustain injuries while working on a farm, living on a farm, visiting a farm, or accompanying a parent employed on a farm. The hazards these youth encounter may be work or non-work in nature, making the farm a unique environment for developing prevention strategies.

### **What recommendations has the federal government made to protect the health of farm youth?**

The Fair Labor Standards Act of 1938 (FLSA) and its amendments set standards for child labor in agriculture. However, the FLSA covers only employees whose work involves production of agricultural goods which are part of interstate commerce. In addition, FLSA regulations do not apply to youth working for their parents or guardian on the family's farm. These household youth account for over 70 percent of all youth work injuries on farms. Youth who work on farms are often not protected by workplace safety and health regulations from the Occupational Safety and Health Administration (OSHA) because they frequently work for small farming operations that are not inspected by OSHA, or because OSHA regulations do not apply to them as farm household members. Finally, for all youth on farms, there are no protections for injuries from hazards associated with non-work activities which often expose youth to the same hazards as work activities. Given the limited protections for youth on farms, there is a need for States and communities to develop and implement programs to reduce childhood agricultural injuries.

### **Where can more information be found?**

Additional NIOSH documents and information on childhood agricultural injuries or other related topics may be obtained by calling the NIOSH toll-free number or visiting the NIOSH homepage on the World Wide Web:

1-800-35NIOSH  
(800-356-4674)  
<http://www.cdc.gov/niosh/homepage.html>



## FOREWORD

More than two million youth less than 20 years of age are potentially exposed to agricultural 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, all-terrain vehicles (ATVs), falls, and animals. 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 non work-related exposures through a comprehensive program of surveillance, research, and partnerships. In keeping with the breadth of the Initiative, the following document presents national and regional data for nonfatal youth injuries on U.S. farms for 1998. These data, drawn from a special survey of farm operators across the U.S., indicate that nearly 33,000 youth were injured on farms during 1998, and that major causes of injury included falls, animals, and vehicles such as ATVs. In addition, this document fills a current data need by providing national and regional demographic information on the youth exposed to these hazards on the farm.

This document represents an important step in understanding the magnitude of youth injuries on farms in the U.S. We hope this document will serve as a valuable resource to federal, state and local agencies, 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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# Section I: The Childhood Agricultural Injury Survey

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## INTRODUCTION

Youth who live on, work on, or visit farms in the United States (U.S.) have received increased attention recently because of their high risk of injuries [NCCAIP 1996; Rivara 1997; Centers for Disease Control and Prevention 1998; Castillo et al. 1999]. A major problem with planning injury prevention programs for these youth is a lack of surveillance data, especially for those injuries which are nonfatal. To address this lack of nonfatal injury data, the National Institute for Occupational Safety and Health (NIOSH), working in cooperation with the U.S. Department of Agriculture (USDA), conducted the Childhood Agricultural Injury Survey (CAIS).

The objective of the CAIS was to determine the frequency, incidence rate, and characteristics of agricultural-related youth injuries occurring in the U.S. This was accomplished by collecting data on childhood agricultural injuries that occurred during calendar year 1998 from a random sample of farms across the U.S. The results of the CAIS provide injury estimates at the regional and national level for all youth who lived, were directly hired to work on, or visited a farm in 1998. Youth contract laborers were excluded in the CAIS.

The intent of the following document is to present these CAIS results in an easily accessible statistical abstract format. Because of the quantity of data presented, no attempt is made to interpret the results presented here. More focused analyses are planned in the future. It is hoped that the data will be used by public health and safety professionals, engineers, and other groups working in the area of childhood farm safety to help guide their intervention programs and injury control research.

These data were collected by the USDA, National Agricultural Statistics Service (NASS) through an interagency agreement with NIOSH. The injury estimates and incidence rates presented in this statistical abstract were calculated by NIOSH and are presented here with the approval of USDA, NASS. Access to all CAIS data files, or additional injury estimates from the CAIS data, are subject to the approval of USDA, NASS.

## METHODS

**General Survey Design:** The CAIS was conducted using a Computer Assisted Telephone Interview (CATI) survey instrument. Randomly selected farming operations across the U.S. were contacted by eight USDA, NASS calling centers during February and March of 1999. The CAIS was conducted in these winter months to increase the response rate of the survey. The survey instrument used for the CAIS was designed to not exceed one-half hour, and is provided in Appendix A.

The sample selection and sampling frame information for the survey was provided by USDA, NASS through an interagency agreement. All agricultural production operations in the NASS area sampling frame, excluding large swine confinement operations, were in the population of study. NASS drew all samples, conducted all telephone contacts to the farm operations, entered all data, and provided all sampling frame information required for the NIOSH sampling design.

For the survey, a farm was defined as any operation of \$1,000 or more of gross agricultural production



within a calendar year, and included both crop and livestock operations. An injury was defined as any condition that resulted in 4 hours or more of restricted activity (e.g., person could not perform work or other normal duties, missed work, missed school), or a condition that required professional medical treatment. In this survey, a youth was defined as any person under the age of 20 years. Household youth were defined as all youth who resided on the farm. Hired farm workers were defined as youth who were hired directly by the farm operator, excluding contract laborers, to work on the farm, but were not household members. Visitors were defined as all other youth who were on the farm, but were not household members or hired workers.

An agricultural work-related injury was defined as any injury meeting the above definition that occurred while performing work on the farm associated with the farm business, including chores. Non-work injuries were defined as injuries occurring on the farm that were not due to farm work. The survey excluded injuries to contractors working for the farm operation, or injuries that occurred to youth off the farm property. The categorical injury variables of "source of injury" and "event or exposure" were coded from narrative injury descriptions using the American National Standards Institute Z16.2-1995 classification system [National Safety Council 1996].

All information provided in the survey was self-reported by the farm operator, spouse, or the injured youth if they were 16 years of age or older. As such, responses to items such as age and the cause of the injury event were subject to the interpretation of the respondent. While the total number of childhood agricultural lost-time injuries was requested for the calendar year 1998, descriptive information was only requested for the four most recent injury events.

**Sampling Design:** A stratified random sample of 50,000 farm operations was drawn to provide estimates for the study population. The strata for the sampling design were the four Bureau of the Census geographic regions (Table 1-1) [Bureau of the Census 1975]. An equal sample allocation of 12,500 farms was selected in each region.

A farm was considered to be a valid member of the sample regardless of whether youth were on the farm in 1998. This was necessary to allow for meaningful estimates of both injuries and the number of youth on farms for the various youth populations covered in the survey (i.e., household youth, youth directly hired to work on the farm, and youth visiting the farm).

**Injury and Youth Estimates:** The national and regional estimates for the number of on-farm injuries and the number of youth on farms (both household and hired youth) were obtained using sampling weights for a stratified random sample. The estimators for these sampling weights and the corresponding variance estimator are presented in Appendix B, and are derived from Cochran [1977]. Because all responses to the survey were on a "per farm" basis, sampling weights were calculated based on the number of farms responding to the survey within each stratum ( $n_h$ ). Finally, the total number of farms within each stratum ( $N_h$ ) was derived from the 1997 Census of Agriculture [National Agricultural Statistics Service 1999]. The sampling weight for an individual stratum was calculated as  $N_h/n_h$ . The national estimate for a specific injury or youth population variable was calculated as the sum of all stratum estimates for that specific variable.

For youth visiting the farm, injury estimates were derived, but youth population estimates were not. The responses to the question on the number of youth visiting the farm in this survey were considered unreliable, and as such, were not included in this report. Methods to improve the estimation of youth visiting farms will be examined in future youth injury surveys.

**Table 1-1. Bureau of the Census Geographic Regions of the United States used in the CAIS.**

<b>Northeast Region</b>	<b>Midwest Region</b>	<b>South Region</b>	<b>West Region</b>
Connecticut	Illinois	Alabama	Alaska
Maine	Indiana	Arkansas	Arizona
Massachusetts	Iowa	Delaware	California
New Hampshire	Kansas	Florida	Colorado
New Jersey	Michigan	Georgia	Hawaii
New York	Minnesota	Kentucky	Idaho
Pennsylvania	Missouri	Louisiana	Montana
Rhode Island	Nebraska	Maryland	Nevada
Vermont	North Dakota	Mississippi	New Mexico
	Ohio	North Carolina	Oregon
	South Dakota	Oklahoma	Utah
	Wisconsin	South Carolina	Washington
		Tennessee	Wyoming
		Texas	
		West Virginia	
		Virginia	

**Incidence Rate Estimates:** The injury incidence rates were calculated as the estimated number of injuries at the regional or national level, divided by the estimated number of youth at the regional or national level, respectively. The rates are in terms of 100 youth potentially exposed.

To facilitate the correct matching of injury estimates to youth at risk, specific demographic terms were used for the various combinations of youth populations in the survey (Table 1-2). In this document, “All youth” refers to all youth covered in the survey (i.e., household youth, hired farm worker youth, and visiting youth), “All farm youth” refers to all household youth and all hired farm worker youth, and “All farm workers” refers to all household workers and hired farm workers. In addition, while youth population estimates are provided for the number of farm household youth who did not work on the farm in 1998, rates for non-work injuries are based on all farm household youth estimated in 1998 because all youth living on the farm were considered at risk for non-work injuries. Finally, no rates for youth visiting the farm were derived because of the unreliable estimate for the number of youth visiting farms in 1998.

**Table 1-2. Demographic terms and the specific youth populations they represent for all statistical tables presented in Sections II and III.**

Terms	Youth Populations			
	Visitors	Non-Working Household	Working Household	Hired Farm Worker
All Youth	<b>X</b>	<b>X</b>	<b>X</b>	<b>X</b>
All Farm Youth		<b>X</b>	<b>X</b>	<b>X</b>
Farm Household		<b>X</b>	<b>X</b>	
All Farm Workers			<b>X</b>	<b>X</b>
Hired Farm Worker				<b>X</b>

The variance calculations for the incident rates were estimated using the linear combination of variances of the injury estimate and the youth estimate as described by Cochran [1977]. The general form of the variance expression, and alternative forms, are presented in Appendix B. Bolded entries in the data tables represent group totals for the indented table entries below then. For example, a bolded entry for “**All Farm Workers**” represents the sum of the “Hired Farm Worker” and “Farm Household Worker” entries in the table. The “Hired Farm Worker” and “Farm Household Worker” estimates are then presented as indented, non-bolded entries beneath the “**All Farm Workers**” table entry.

**Categorical Frequency Estimates:** Categorical variable estimates from the CAIS are based on two types of information: demographic and injury. Demographic data include an estimate of the number of youth living on a farm, the number of youth hired to work on a farm, the distribution of youth by age and sex, and whether a household youth worked on the farm. Demographic data were not collected for youth visiting the farm. Injury data include information such as whether an injury was work-related or not, the nature of the injury, the source of the injury, and the body part injured. This information was only collected for the four most recent injuries that occurred on a farm.

The frequency estimates for selected demographic variables were adjusted to account for “missing values” in the data. The variables adjusted were age and sex. This was done for both household and hired worker demographics. The adjustments were made based on the percent distribution of the “known values” in the data set. For example, if an estimated 1,000 household youth were identified as having a missing value for sex, and the known cases indicated that 52 percent of household youth were male, the frequency estimate for household males would have been increased by 520, while the female estimate would be increased by 480 for household youth. In addition to age and sex, missing values for work status of household members (i.e., did work on the farm, or did not do work on the farm) were also adjusted based on the distribution of known values. Variance estimates were adjusted to account for this assignment of missing values to known categories.

For injury data, adjustments were made for sex, age, relationship to the farm (i.e., household youth, hired youth, visiting youth), and work status for most tables, but were not done for more complex tables involving cross tabulations between sex or age and type of farming operation. The method of adjusting for missing values was similar to that described for the demographic variables. Information on other

injury-related values, such as source of injury and type of injury event, were not adjusted.

Frequency tables for regional and national data are presented at differing levels of detail because of differing levels of sampling error between the various estimates. In general, an estimate was not reported if the relative standard error of the estimate exceeded 33 percent. In a limited number of cases, values are reported with relative standard errors above 33% because they were deemed critical to the interpretation of the frequency table. However, no estimate is reported with a relative standard error greater than 40 percent. National frequency tables provide the highest level of detail and cross classification of information. The regional tables, in general, provide less detail than the national tables.

**Survey Limitations:** There are some limitations to the results presented in this report. First, the recall period for an injury in this survey was one year. While the definition of injury was for more severe cases, which may be easier to recall, there is still the possibility that a reportable injury was not remembered by a respondent. A second limitation is that most surveys were conducted with the female head of household, which may have resulted in an under reporting of hired worker injuries, especially for larger farming operations with many employees. In addition, there was no way to verify the accuracy or completeness of the responses given for a survey, which could impart some response bias into the overall survey results. This survey also did not include injuries which occurred to youth contract farm workers. Injuries to contract farm workers are being assessed through a separate NIOSH study, and provided in a separate report.

Finally, there is the possibility of a non-response bias because of the non-respondents to the telephone survey. Because of the design of the survey, it was not possible to make a second contact to farm operators who refused to participate in the survey. This did not allow for a follow back questionnaire to assess these non-respondents. However, the demographic characteristics of the farms for the respondents to the questionnaire were found to be similar in nature to those reported for farms in the 1997 Census of Agriculture. This similarity between the survey estimates and the 1997 Census of Agriculture data suggest that the respondents to the survey were representative of farm operators across the United States, and that any non-response bias in the survey would be expected to be minimal.

## HIGHLIGHTS OF RESULTS

A total of 25,942 of the randomly sampled 50,000 farm operations agreed to participate in the survey. The survey response rate by region ranged from a high of 58 percent for the West, to a low of 44 percent for the Northeast.

Based on this sample, there were an estimated 1,930,306 ( $\pm 23,179$ ) youth under the age of 20 years who lived or worked on a farm in 1998. Farm household youth accounted for 1,263,830 ( $\pm 15,152$ ) of youth, with the remaining 666,476 ( $\pm 16,543$ ) youth being hired workers. Most youth were in the Midwest region of the United States (905,251  $\pm 16,358$ ), followed by the South (556,871  $\pm 14,546$ ). The fewest youth were in the Northeast region (165,640  $\pm 4,042$ ).

The number of youth under the age of 20 years who did work on farms in 1998, including both household and hired youth, was 1,393,670 ( $\pm 20,838$ ). Youth 16 to 19 years of age accounted for approximately 53 percent of these workers (744,694  $\pm 14,450$ ), although there were 129,774 ( $\pm 4,374$ ) youth under the age of 10 years who also worked on farms during 1998. Finally, approximately 73 percent of all youth working on farms in 1998 were male (1,011,843  $\pm 16,719$ ).

There were an estimated 32,808 ( $\pm 2,241$ ) youth injuries on farms in 1998. Of these injuries, 14,590 ( $\pm 1,322$ ) were work-related in nature, while 18,218 ( $\pm 1,322$ ) were reported as not work-related. Household youth accounted for the highest number of injuries (23,640  $\pm 1,830$ ), followed by visitors (7,040  $\pm 873$ ) and hired workers (2,127  $\pm 426$ ). Most injuries occurred to males (26,142  $\pm 1,989$ ). The injury rate for all male farm youth (i.e., family and hired youth, excluding visitors) was 1.64 injuries per 100 youth ( $\pm 0.14$ ) while all female farm youth had a rate of 0.79 injuries per 100 youth ( $\pm 0.10$ ).

Youth less than 10 years of age were estimated to have the highest number of injuries (11,210  $\pm 1,099$ ), followed by youth 12 and 13 years of age (5,100  $\pm 803$ ). The highest injury rate for all farm youth was seen for both youth less than 10 years of age and youth 12 and 13 years of age with a rate of approximately 2 injuries per 100 youth. For work related injuries, the highest number of injuries was estimated for youth 18 and 19 years of age (3,229  $\pm 588$ ), while the highest injury rate was for youth less than 10 years of age (1.40  $\pm 0.33$  injuries per 100 workers).

The injury rate for all farm household youth was 1.87 injuries per 100 household youth ( $\pm 0.15$ ). Work-related injuries occurred at a rate of 1.41 injuries per 100 household youth ( $\pm 0.16$ ), while non-work injuries had an incidence rate of 1.06 injuries per 100 household youth ( $\pm 0.10$ ). All injuries to hired workers were reported as work-related, for an injury rate of 0.32 injuries per 100 hired workers ( $\pm 0.06$ ). The overall work-related injury rate for both family and hired workers was 0.89 injuries per 100 workers ( $\pm 0.09$ ).

The region of the nation with the highest number of on-farm youth injuries was the Midwest with an estimated 16,443 injuries ( $\pm 1,824$ ), followed by the South (8,810  $\pm 1,192$ ), West (5,097  $\pm 456$ ), and Northeast (2,458  $\pm 262$ ). The estimated injury rate for all farm youth was relatively consistent between regions: 1.20  $\pm 0.15$  injuries per 100 farm youth in the Northeast; 1.33  $\pm 0.17$  injuries per 100 farm youth in the Midwest; 1.36  $\pm 0.20$  injuries per 100 farm youth in the South; and 1.38  $\pm 0.14$  injuries per 100 farm youth in the West.

The major sources of injury to youth on U.S. farming operations were floors, walkways, ground, or other surfaces (6,435  $\pm 757$ ), animals (2,932  $\pm 537$ ), and non-industrial off-road vehicles (1,963  $\pm 456$ ). The leading causes of these injuries were falls (7,225  $\pm 803$ ), off-road transportation incidents (5,082  $\pm 727$ ), and being struck by objects (3,613  $\pm 634$ ). The parts of the body most commonly injured were the hands, wrist, or fingers (7,096  $\pm 840$ ), the head (4,703  $\pm 655$ ), and the legs (3,833  $\pm 530$ ). These injuries most frequently resulted in lacerations (8,162  $\pm 877$ ), fractures (5,675  $\pm 687$ ), or scrapes and abrasions (3,709  $\pm 610$ ).

Livestock operations reported the most estimated injuries (16,981  $\pm 1,414$ ). Within livestock operations, beef cattle was the sector with the highest number of injuries (8,104  $\pm 897$ ) followed by dairy farms (5,913  $\pm 931$ ). Crop operations reported an estimated 12,338 youth injuries ( $\pm 1,152$ ), with cash grain operations having the most injuries (7,263  $\pm 927$ ), followed by tobacco farms (1,226  $\pm 388$ ). The household injury rate per 100 youth was 2.17 ( $\pm 0.22$ ) for all livestock operations and 1.59 ( $\pm 0.17$ ) for all crop operations. The work-related injury rate for household and hired workers was highest for livestock operations (1.19  $\pm 0.16$  injuries per 100 working youth), with crop operations having a rate of 0.59 injuries per 100 working youth ( $\pm 0.09$ ).

The complete results are presented in Sections II and III of the statistical abstract. Section II presents the national statistics, with Section III providing the region-specific statistics. Injury estimates, demographic estimates, and incidence rates are included in both sections

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Section II:  
National Injury and  
Demographic Data





**Table 2-1. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by region of the United States: 1998.**

Region	Youth Injuries	Standard Error
Northeast	2,458	262
Midwest	16,443	1,824
South	8,810	1,192
West	5,097	456

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-2. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Youth Injuries	Standard Error
<b>All youth<sup>1</sup></b>	<b>32,808</b>	<b>2,241</b>
Working	14,590	1,322
Non-working	18,218	1,536
Visitors	7,040	873
<b>All farm youth<sup>2</sup></b>	<b>25,768</b>	<b>1,938</b>
<b>Farm household</b>	<b>23,640</b>	<b>1,830</b>
Working	10,254	1,134
Non-working	13,386	1,231
<b>All farm workers<sup>3</sup></b>	<b>12,382</b>	<b>1,253</b>
Hired workers	2,127	426

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

<sup>2</sup> All household youth and hired youth combined.

<sup>3</sup> All household workers and hired workers combined.

**Table 2-3. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Youth Injuries	Standard Error	Youth Injuries	Standard Error
<b>All youth<sup>1</sup></b>	<b>26,142</b>	<b>1,989</b>	<b>6,666</b>	<b>781</b>
Working	13,194	1,314	1,396	322
Non-working	12,948	1,249	5,270	713
<b>All farm youth<sup>2</sup></b>	<b>20,334</b>	<b>1,700</b>	<b>5,434</b>	<b>709</b>
<b>Farm household</b>	<b>18,307</b>	<b>1,596</b>	<b>5,333</b>	<b>700</b>
Working	8,786	1,075	1,468	359
Non-working	9,521	1,014	3,865	597
<b>All farm workers<sup>3</sup></b>	<b>10,813</b>	<b>1,192</b>	<b>1,569</b>	<b>376</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

<sup>2</sup> All household youth and hired youth combined.

<sup>3</sup> All household workers and hired workers combined.

**Table 2-4. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<b>&lt;10 years</b>	<b>11,210</b>	<b>1,099</b>
<b>10-15 years</b>	<b>12,882</b>	<b>1,274</b>
10-11 years	3,653	598
12-13 years	5,100	803
14-15 years	4,129	651
<b>16-19 years</b>	<b>8,715</b>	<b>989</b>
16-17 years	3,983	606
18-19 years	4,732	749

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-5. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Youth Injuries	Standard Error	Youth Injuries	Standard Error
<b>&lt;10 years</b>	<b>8,044</b>	<b>951</b>	<b>3,026</b>	<b>408</b>
<b>10-15 years</b>	<b>9,818</b>	<b>1,110</b>	<b>2,972</b>	<b>538</b>
10-11 years	2,623	500	1,149	362
12-13 years	4,183	705	--- <sup>2</sup>	---
14-15 years	3,012	564	956	275
<b>16-19 years</b>	<b>8,280</b>	<b>980</b>	--- <sup>2</sup>	---
16-17 years	3,801	600	--- <sup>2</sup>	---
18-19 years	4,479	741	--- <sup>2</sup>	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.  
<sup>2</sup> Cells are too small to report detailed groups.

**Table 2-6. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group and work status: 1998.**

Age Group <sup>2</sup>	Working		Non-working	
	Youth Injuries	Standard Error	Youth Injuries	Standard Error
<b>&lt;10 years</b>	<b>2,069</b>	<b>443</b>	<b>9,056</b>	<b>986</b>
<b>10-15 years</b>	<b>5,330</b>	<b>799</b>	<b>7,456</b>	<b>897</b>
10-11 years	1,600	412	2,027	430
12-13 years	1,761	445	3,300	639
14-15 years	1,969	416	2,129	458
<b>16-19 years</b>	<b>7,191</b>	<b>901</b>	<b>1,455</b>	<b>387</b>
16-17 years	3,111	537	--- <sup>3</sup>	---
18-19 years	4,080	689	--- <sup>3</sup>	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.  
<sup>2</sup> Table excludes 251 estimated injuries where some combination of age and work status was unknown.  
<sup>3</sup> Cells are too small to report detailed groups.

**Table 2-7. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>12,338</b>	<b>1,152</b>
Cash grains	7,263	927
Tobacco	1,226	388
Veg., fruits, nuts	1,103	271
All other crops	2,746	497
<b>Livestock</b>	<b>16,981</b>	<b>1,414</b>
Beef cattle	8,104	897
Dairy	5,913	931
Hogs, goats, sheep	1,726	493
All other livestock	1,238	307
<b>Unknown</b>	<b>3,489</b>	<b>---</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-8. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by sex and type of farm: 1998.**

Sex	Type of Farm	Youth Injuries	Standard Error
<b>Males</b>	<b>Crops</b>	<b>8,482</b>	<b>876</b>
	Cash grains	4,804	670
	All other crops	3,678	554
	<b>Livestock</b>	<b>12,005</b>	<b>1,175</b>
	Beef cattle	5,312	712
	Dairy	4,524	818
	Hogs, goats, sheep	1,157	818
	All other livestock	1,012	288
<b>Females</b>	<b>Crops</b>	<b>1,493</b>	<b>324</b>
	<b>Livestock</b>	<b>3,694</b>	<b>542</b>
	Beef cattle	2,231	435
	All other livestock	1,463	324
<b>Unknown</b>	<b>Unknown</b>	<b>7,134</b>	<b>---</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-9. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group and type of farm: 1998.**

Age Group	Type of Farm	Youth Injuries	Standard Error
<b>&lt;10 years</b>	<b>Crops</b>	<b>5,850</b>	<b>815</b>
	Cash grains	3,638	671
	All other crops	2,212	471
	<b>Livestock</b>	<b>5,098</b>	<b>696</b>
	Beef cattle	2,539	492
	Dairy	1,577	388
	All other livestock	982	305
<b>10-15 years</b>	<b>Crops</b>	<b>4,004</b>	<b>614</b>
	Cash grains	2,340	482
	All other crops	1,664	368
	<b>Livestock</b>	<b>6,771</b>	<b>892</b>
	Beef cattle	3,472	596
	Dairy	2,157	580
	All other livestock	1,142	315
<b>16-19 years</b>	<b>Crops</b>	<b>2,444</b>	<b>500</b>
	Cash grains	1,284	383
	All other crops	1,160	316
	<b>Livestock</b>	<b>4,855</b>	<b>676</b>
	Beef cattle	2,056	444
	Dairy	1,959	436
	All other livestock	840	265
<b>Unknown</b>	<b>Unknown</b>	<b>3,786</b>	<b>---</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.



**Table 2-10. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by work status and type of farm: 1998.**

Work Status	Farm Type	Youth Injuries	Standard Error
<b>Working</b>	<b>Crops</b>	<b>5,601</b>	<b>813</b>
	Cash grains	4,066	754
	All other crops	1,535	345
	<b>Livestock</b>	<b>8,310</b>	<b>1,011</b>
	Beef cattle	3,586	585
	Dairy	3,475	728
	All other livestock	1,249	385
<b>Non-working</b>	<b>Crops</b>	<b>6,696</b>	<b>786</b>
	Cash grains	3,196	528
	All other crops	3,500	582
	<b>Livestock</b>	<b>8,615</b>	<b>897</b>
	Beef cattle	4,482	651
	Dairy	2,417	493
	All other livestock	1,716	376
<b>Unknown</b>	<b>Unknown</b>	<b>3,586</b>	<b>---</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-11. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Scrape,abrasion	3,709	610
Bruise,contusion	2,603	475
Sprain,strain,torn ligament	2,728	543
Broken bone,fracture	5,675	687
Cut,laceration	8,162	877
Puncture,stab,jab	1,251	338
Burn,blister,scald	1,017	330
Multiple injuries	2,141	491
Other injuries	2,809	515
Unknown	2,713	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-12. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by body part injured: 1998.**

Body Part Injured	Youth Injuries	Standard Error
Head, skull	4,703	655
Face	2,271	480
Shoulder, chest, back	2,579	463
Arm	2,649	440
Hand, wrist, fingers	7,096	840
Leg	3,833	530
Foot, ankle, toes	3,686	608
Multiple body parts	1,605	422
Other body parts	1,673	391
Unknown	2,713	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-13. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by source of injury: 1998.**

Source of Injury	Youth Injuries	Standard Error
Agricultural, garden machinery	1,179	320
Animals, animal products	2,932	537
Floors, walkways, ground surfaces	6,435	757
Structural elements	1,621	420
Handtools-nonpowered	1,733	410
Highway vehicle, motorized	1,193	328
Offroad vehicle, nonindustrial	1,963	456
Plant or industrial powered vehicles, tractors	1,109	343
Other sources	9,838	1,200
Unknown	4,805	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-14. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by injury event: 1998.**

Type of event	Youth Injuries	Standard Error
Contact with object	2,488	485
Struck against object	2,795	554
Struck by object	3,613	634
Caught in, compressed by equipment or object	1,065	297
Fall, unspecified	1,520	389
Fall to lower level	3,988	579
Fall on same level	1,717	399
Non-highway accident, except rail, air, water	5,082	727
Assaults by animals	2,642	517
Other events	3,242	762
Unknown	4,656	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-15. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by body part injured and type of injury: 1998.**

Type of Injury	Body Part	Youth Injuries	Standard Error
Cut, laceration	Head, skull	1,942	448
	Face	1,151	341
	Hand, wrist, fingers	2,514	474
Broken bone, fracture	Arm	1,867	395
	Hand, wrist, fingers	1,260	353
Scrape, abrasion	Head, skull	1,650	409
Other injuries	Other injuries	19,711	1,493
Unknown	Unknown	2,713	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-16. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by injury event and source of injury: 1998.**

Injury Event	Source of Injury	Youth Injuries	Standard Error
Struck by an object	Handtools-nonpowered	1,018	320
Falls, unspecified	Floors,walkways, ground surfaces	1,370	372
Fall to lower level	Floors,walkway, ground surfaces	3,801	574
Non-highway accident, except rail, air, water	Offroad vehicle, nonindustrial	1,839	439
Assaults by animals	Animals,animal products	2,459	502
Other events	Other sources	17,555	1,563
Unknown	Unknown	4,766	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-17. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by sex and type of injury: 1998.**

Sex	Type of Injury	Youth Injuries	Standard Error
<b>Males</b>	Scrape,abrasion	1,535	290
	Bruise,contusion	1,525	345
	Sprain,strain,torn ligament	1,908	412
	Broken bone,fracture	4,097	581
	Cut,laceration	6,789	811
	Other injuries	5,123	746
<b>Females</b>	Broken bone,fracture	1,153	298
	Cut,laceration	1,167	324
	Other injuries	2,904	465
<b>Unknown</b>	Unknown	6,607	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.



**Table 2-18. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by sex and body part injured: 1998.**

Sex	Injured Body Part	Youth Injuries	Standard Error
<b>Males</b>	Head, skull	2,734	444
	Face	1,792	428
	Shoulder, chest, back	1,683	368
	Arm	1,907	384
	Hand, wrist, fingers	5,416	724
	Leg	2,868	499
	Foot, ankle, toes	2,520	480
	Multiple body parts	1,162	341
	Other body parts	895	263
<b>Females</b>	Hand, wrist, fingers	1,404	364
	Other body parts	3,820	529
<b>Unknown</b>	Unknown	6,607	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-19. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by sex and source of injury: 1998.**

Sex	Source of Injury	Youth Injuries	Standard Error
<b>Males</b>	Agricultural, garden machinery	1,033	298
	Animals, animal products	1,618	361
	Floors, walkways, ground surfaces	4,032	568
	Other structural elements	1,155	357
	Handtools-nonpowered	1,477	378
	Offroad vehicle, nonindustrial	1,490	394
	Plant or industrial powered vehicles, tractors	1,109	343
	Other sources	8,605	1,056
<b>Females</b>	Floors, walkways, ground surfaces	1,717	363
	Other sources	3,451	529
<b>Unknown</b>	Unknown	7,121	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-20. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by sex and injury event: 1998.**

Sex	Injury Event	Youth Injuries	Standard Error
<b>Males</b>	Contact with objects and equipment, unspecified	1,902	420
	Struck against object	2,141	473
	Struck by object	3,007	585
	Fall, unspecified	1,082	322
	Fall to lower level	2,500	434
	Fall on same level	1,350	353
	Nonhighway accident, except rail, air, water	3,668	594
	Assaults by animals	1,420	439
	Other events	3,541	685
<b>Females</b>	Fall to lower level	1,009	263
	Other events	4,179	624
<b>Unknown</b>	Unknown	7,009	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-21. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group and type of injury: 1998.**

Age Group	Type of Injury	Youth Injuries	Standard Error
<b>&lt;10 years</b>	Scrape,abrasion	2,483	601
	Broken bone,fracture	2,179	412
	Cut,laceration	3,601	624
	Other injuries	3,052	540
<b>10-15 years</b>	Sprain,strain,torn ligament	1,358	378
	Broken bone,fracture	2,644	489
	Cut,laceration	2,872	509
	Other injuries	4,154	641
<b>16-19 years</b>	Sprain,strain,torn ligament	1,021	303
	Cut,laceration	1,689	393
	Other injuries	4,823	653
<b>Unknown</b>	Unknown	2,932	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-22. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group and body part injured: 1998.**

Age Group	Body Part	Youth Injuries	Standard Error
<b>&lt;10 years</b>	Head, skull	3,397	680
	Face	1,047	305
	Arm	1,436	345
	Hand, wrist, fingers	1,695	407
	Leg	1,097	321
	Other body parts	2,643	495
<b>10-15 years</b>	Shoulder, chest, back	1,330	382
	Hand, wrist, fingers	2,560	486
	Leg	1,694	380
	Foot, ankle, toes	2,099	479
	Other body parts	3,346	534
<b>16-19 years</b>	Hand, wrist, fingers	2,840	556
	Other body parts	4,692	629
<b>Unknown</b>	Unknown	2,932	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-23. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group and source of injury: 1998.**

Age Group	Source of Injury	Youth Injuries	Standard Error
<b>&lt;10 years</b>	Floors, walkways, ground surfaces	3,325	541
	Other sources	6,214	800
	Unknown	2,288	---
<b>10-15 years</b>	Animals, animal products	1,053	312
	Floors, walkways, ground surfaces	2,063	415
	Offroad vehicle, nonindustrial	1,287	389
	Other sources	6,403	865
<b>16-19 years</b>	Animals, animal products	1,299	351
	Handtools, nonpowered	1,028	336
	Other sources	5,112	692
<b>Unknown</b>	Unknown	2,736	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-24. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group and injury event: 1998.**

Age Group	Injury Event	Youth Injuries	Standard Error
<b>&lt;10 years</b>	Fall to lower level	2,337	439
	Fall on same level	1,110	334
	Nonhighway accident, except rail, air, water	1,085	298
	Other events	4,883	736
	Unknown	2,412	---
<b>10-15 years</b>	Struck against object	1,262	395
	Struck by object	1,050	285
	Fall to lower level	1,152	304
	Nonhighway accident, except rail, air, water	3,450	621
	Other events	4,091	670
<b>16-19 years</b>	Struck by object	1,661	421
	Assaults by animals	1,189	346
	Other events	4,662	654
<b>Unknown</b>	Unknown	2,464	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-25. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by work status and type of injury: 1998.**

Work Status	Type of Injury	Youth Injuries	Standard Error
<b>Working</b>	Scrape,abrasion	2,218	588
	Bruise,contusion	1,489	359
	Sprain,strain,torn ligament	1,649	414
	Broken bone,fracture	1,898	420
	Cut,laceration	3,508	579
	Other injuries	3,549	612
<b>Non-working</b>	Scrape,abrasion	1,491	312
	Bruise,contusion	1,114	321
	Sprain,strain,torn ligament	1,079	316
	Broken bone,fracture	3,777	566
	Cut,laceration	4,653	666
	Multiple injuries	1,538	430
	Other injuries	2,131	461
<b>Unknown</b>	Unknown	2,714	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.



**Table 2-26. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by work status and body part injured: 1998.**

Work Status	Body Part	Youth Injuries	Standard Error
<b>Working</b>	Head, skull	1,984	501
	Face	1,129	376
	Shoulder, chest, back	1,474	368
	Hand, wrist, fingers	4,023	636
	Leg	1,744	415
	Foot, ankle, toes	1,944	434
	Other body parts	2,013	460
<b>Non-working</b>	Head, skull	2,719	483
	Face	1,141	323
	Shoulder, chest, back	1,105	327
	Arm	2,059	409
	Hand, wrist, fingers	3,073	664
	Leg	2,088	434
	Foot, ankle, toes	1,741	397
	Multiple body parts	1,073	339
Other body parts	784	257	
<b>Unknown</b>	Unknown	2,714	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-27. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by work status and source of injury: 1998.**

Work Status	Source of Injury	Youth Injuries	Standard Error
<b>Working</b>	Animals, animal products	1,719	406
	Floors, walkways, ground surfaces	1,863	416
	Other structural elements	1,028	336
	Handtools-nonpowered	1,147	336
	Other sources	6,592	821
	Unknown	2,255	---
<b>Non-working</b>	Animals, animal products	1,214	351
	Floors, walkways, ground surfaces	4,571	631
	Offroad vehicle, nonindustrial	1,473	404
	Other sources	8,396	993
<b>Unknown</b>	Unknown	2,550	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-28. National estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by work status and injury event: 1998.**

Work Status	Injury Event	Youth Injuries	Standard Error
<b>Working</b>	Contact with objects and equipment, unspecified	1,319	352
	Struck against object	1,037	318
	Struck by object	2,403	507
	Fall to lower level	1,022	310
	Nonhighway accident, except rail, air, water	1,361	394
	Assaults by animals	1,521	383
	Other events	3,868	996
	Unknown	2,072	---
<b>Non-working</b>	Contact with objects and equipment, unspecified	1,169	333
	Struck against object	1,757	426
	Struck by object	1,210	337
	Fall to lower level	2,966	487
	Fall on same level	1,401	365
	Nonhighway accident, except rail, air, water	3,721	612
	Assaults by animals	1,120	347
	Other events	2,276	350
<b>Unknown</b>	Unknown	2,585	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 2-29. National estimates of farm injuries to all farm youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<b>&lt;10 years</b>	<b>8,738</b>	<b>961</b>
<b>10-15 years</b>	<b>10,357</b>	<b>1,117</b>
10-11 years	2,843	535
12-13 years	4,166	693
14-15 years	3,348	582
<b>16-19 years</b>	<b>6,674</b>	<b>858</b>
16-17 years	3,036	529
18-19 years	3,638	632

<sup>1</sup> All household youth and hired youth combined.

**Table 2-30. National estimates of farm injuries to farm household youth less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<b>&lt;10 years</b>	<b>8,738</b>	<b>956</b>
<b>10-15 years</b>	<b>9,932</b>	<b>1,083</b>
10-11 years	2,843	535
12-13 years	4,041	681
14-15 years	3,048	574
<b>16-19 years</b>	<b>4,971</b>	<b>741</b>
16-17 years	2,288	449
18-19 years	2,683	449

**Table 2-31. National estimates of farm injuries to farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>9,143</b>	<b>964</b>
Cash grains	5,133	746
Tobacco	1,226	388
All other crops	2,784	475
<b>Livestock</b>	<b>12,897</b>	<b>1,281</b>
Beef cattle	5,898	780
Dairy	4,864	871
Hogs, goats, sheep	1,507	491
All other livestock	628	219
<b>Unknown</b>	<b>1,600</b>	<b>---</b>

**Table 2-32. National estimates of farm injuries to farm household youth less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Scrape,abrasion	2,832	575
Bruise,contusion	2,033	432
Sprain,strain,torn ligament	2,113	508
Broken bone,fracture	3,936	583
Cut,laceration	6,431	818
Multiple injuries	1,339	370
Other injuries	3,683	612
Unknown	1,276	---

**Table 2-33. National estimates of farm injuries to farm household youth less than 20 years of age by body part injured: 1998.**

Body Part	Youth Injuries	Standard Error
Head,skull	3,914	661
Face	1,659	441
Shoulder,chest,back	1,966	428
Arm	2,006	412
Hand,wrist,fingers	4,556	663
Leg	2,841	554
Foot,ankle,toes	2,935	523
Multiple body parts	1,239	355
Other body parts	1,251	374
Unknown	1,273	---

**Table 2-34. National estimates of farm injuries to farm household youth less than 20 years of age by source of injury: 1998.**

Source of Injury	Youth Injuries	Standard Error
Animals, animal products	1,925	457
Floors, walkways, ground surfaces	4,945	414
Other structural elements	1,111	352
Highway vehicle, motorized	1,013	301
Offroad vehicle, nonindustrial	1,504	372
Other sources	9,964	1,080
Unknown	3,178	---

**Table 2-35. National estimates of farm injuries to farm household youth less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Contact with objects and equipment	1,820	425
Struck against object	1,989	460
Struck by object	2,787	523
Fall, unspecified	1,261	377
Fall to lower level	2,850	489
Fall on same level	1,677	398
Nonhighway accident, except rail, air, water	3,931	626
Assaults by animals	1,545	404
Other events	2,588	570
Unknown	3,192	---

**Table 2-36. National estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<b>&lt;10 years</b>	<b>1,818</b>	<b>419</b>
<b>10-15 years</b>	<b>4,828</b>	<b>764</b>
10-11 years	1,307	370
12-13 years	1,719	442
14-15 years	1,802	395
<b>16-19 years</b>	<b>5,736</b>	<b>798</b>
16-17 years	2,507	487
18-19 years	3,229	588

<sup>1</sup> All household workers and hired workers combined.

**Table 2-37. National estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>3,484</b>	<b>536</b>
Cash grains	2,043	411
All other crops	1,442	340
<b>Livestock</b>	<b>7,135</b>	<b>944</b>
Beef cattle	2,986	535
Dairy	3,286	719
All other livestock	863	301
<b>Unknown</b>	<b>1,763</b>	<b>---</b>

<sup>1</sup> All household workers and hired workers combined.



**Table 2-38. National estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Bruise, contusion	1,249	324
Sprain, strain, torn ligament	1,446	396
Broken bone, fracture	1,357	345
Cut, laceration	2,928	526
Other injuries	3,820	589
Unknown	1,582	---

<sup>1</sup> All household workers and hired workers combined.

**Table 2-39. National estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by body part injured: 1998.**

Body Part	Youth Injuries	Standard Error
Face	1,129	376
Shoulder, chest, back	1,474	368
Hand, wrist, finger	3,057	527
Leg	1,525	385
Foot, ankle, toes	1,654	399
Other body parts	1,961	370
Unknown	1,582	---

<sup>1</sup> All household workers and hired workers combined.

**Table 2-40. National estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by source of injury: 1998.**

Source of Injury	Youth Injuries	Standard Error
Animals, animal products	1,589	391
Floors, walkways, ground surfaces	1,826	672
Other sources	7,148	818
Unknown	1,819	---

<sup>1</sup> All household workers and hired workers combined.

**Table 2-41. National estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Contact with objects and equipment, unspecified	1,060	315
Struck by object	1,885	445
Nonhighway accident, except rail, air, water	1,215	376
Other events	6,439	790
Unknown	1,783	---

<sup>1</sup> All household workers and hired workers combined.

**Table 2-42. National estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by relationship to farm: 1998.**

Relationship to Farm	Youth Injuries	Standard Error
<b>All farm workers</b>	<b>12,382</b>	<b>1,253</b>
Household - working	10,253	1,135
Hired workers	2,129	514

<sup>1</sup> All household workers and hired workers combined.

**Table 2-43. National estimates of all farm youth<sup>1</sup> less than 20 years of age by region of the United States: 1998.**

Region	Estimated Youth	Standard Error
Northeast	165,640	4,042
Midwest	905,251	16,358
South	556,871	14,546
West	302,544	6,465

<sup>1</sup> All household youth and hired youth combined.

**Table 2-44. National estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>1,930,306</b>	<b>23,179</b>
<b>Farm household</b>	<b>1,263,830</b>	<b>15,152</b>
Working	727,194	11,373
Non-working	536,636	9,843
<b>All farm workers<sup>2</sup></b>	<b>1,393,670</b>	<b>20,838</b>
Hired workers	666,476	16,543

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 2-45. National estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>1,242,599</b>	<b>17,675</b>	<b>687,707</b>	<b>10,372</b>
<b>Farm household</b>	<b>665,533</b>	<b>9,586</b>	<b>598,297</b>	<b>9,168</b>
Working	434,475	7,742	292,719	6,393
Non-working	231,058	5,663	305,578	6,636
<b>All farm workers<sup>2</sup></b>	<b>1,011,843</b>	<b>16,719</b>	<b>381,827</b>	<b>8,044</b>
Hired workers	577,066	14,242	89,410	4,661

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 2-46. National estimates of all farm youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>436,019</b>	<b>8,720</b>
<b>10-15 years</b>	<b>658,015</b>	<b>10,727</b>
10-11 years	154,453	3,923
12-13 years	203,900	4,751
14-15 years	299,662	6,623
<b>16-19 years</b>	<b>836,272</b>	<b>14,746</b>
16-17 years	470,101	9,684
18-19 years	366,171	8,349

<sup>1</sup> All household youth and hired youth combined.

**Table 2-47. National estimates of farm household youth less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>430,580</b>	<b>8,655</b>
<b>10-15 years</b>	<b>472,307</b>	<b>7,993</b>
10-11 years	136,931	3,629
12-13 years	158,275	3,925
14-15 years	177,101	4,144
<b>16-19 years</b>	<b>360,943</b>	<b>6,414</b>
16-17 years	202,626	4,377
18-19 years	158,318	3,942

**Table 2-48. National estimates of farm household youth less than 20 years of age, by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>226,032</b>	<b>5,515</b>	<b>204,548</b>	<b>5,277</b>
<b>10-15 years</b>	<b>245,794</b>	<b>5,423</b>	<b>226,513</b>	<b>5,093</b>
10-11 years	69,096	2,557	67,835	2,564
12-13 years	81,943	2,868	76,332	2,694
14-15 years	94,755	3,714	82,346	2,800
<b>16-19 years</b>	<b>193,706</b>	<b>4,498</b>	<b>167,237</b>	<b>4,220</b>
16-17 years	107,731	3,189	94,895	3,037
18-19 years	85,974	2,897	72,344	2,669

**Table 2-49. National estimates of farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>616,277</b>	<b>11,414</b>
Cash grains	368,892	9,300
Tobacco	46,711	3,506
Cotton	20,730	2,356
Vegetables	27,088	2,362
Fruits, nuts	36,013	2,194
Nursery	23,404	2,220
Other crops	93,440	4,390
<b>Livestock</b>	<b>637,746</b>	<b>11,876</b>
Beef cattle	350,180	8,767
Dairy	165,233	6,654
Hogs	44,415	3,666
Sheep, goats	16,337	1,794
Equine	25,170	2,118
Poultry, eggs	23,907	2,735
Other livestock	12,502	1,736
<b>Unknown</b>	<b>9,808</b>	<b>---</b>

**Table 2-50. National estimates of farm household youth less than 20 years of age by type of farm and sex: 1998.**

Type of Farm	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>Crops</b>	<b>329,114</b>	<b>7,181</b>	<b>287,163</b>	<b>6,645</b>
Cash grains	199,848	5,889	169,044	5,289
Tobacco	26,671	2,311	20,040	1,877
Cotton	9,676	1,231	11,054	1,538
Vegetables	13,351	1,393	13,737	1,462
Fruits, nuts	18,876	1,354	17,137	1,218
Nursery	12,152	1,276	11,252	1,326
Other crops	48,541	2,677	44,899	2,631
<b>Livestock</b>	<b>331,433</b>	<b>7,204</b>	<b>306,313</b>	<b>7,003</b>
Beef cattle	181,398	5,355	168,782	5,209
Dairy	85,366	3,859	79,867	3,826
Hogs	22,342	2,004	22,073	2,144
Sheep, goats	9,201	1,117	--- <sup>1</sup>	--- <sup>1</sup>
Equine	12,564	1,310	12,606	1,290
Poultry, eggs	13,069	1,747	10,838	1,485
Other livestock	7,494	1,219	12,144	1,227
<b>Unknown</b>	<b>4,985</b>	<b>---</b>	<b>4,823</b>	<b>---</b>

<sup>1</sup> "Sheep, goats" are combined with "Other livestock" because the estimates for some female categories were not reportable.



**Table 2-51. National estimates of farm household youth less than 20 years of age by age group and type of farm: 1998.**

Age Group	Farm Type	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>Crops</b>	<b>217,287</b>	<b>6,371</b>
	<b>Livestock</b>	<b>210,563</b>	<b>6,272</b>
	<b>Unknown</b>	<b>2,730</b>	<b>---</b>
<b>10-15 years</b>	<b>Crops</b>	<b>229,952</b>	<b>5,841</b>
	<b>Livestock</b>	<b>238,651</b>	<b>5940</b>
	<b>Unknown</b>	<b>3,705</b>	<b>---</b>
10-11 years	Crops	65,290	2,517
	Livestock	70,626	2,691
	Unknown	1,016	---
12-13 years	Crops	77,115	2,780
	Livestock	79,940	2,875
	Unknown	1,219	---
14-15 years	Crops	87,546	3,083
	Livestock	88,085	2,953
	Unknown	1,469	---
<b>16-19 years</b>	<b>Crops</b>	<b>169,039</b>	<b>4,529</b>
	<b>Livestock</b>	<b>188,532</b>	<b>4,889</b>
	<b>Unknown</b>	<b>3,373</b>	<b>---</b>
16-17 years	Crops	95,917	3,117
	Livestock	104,834	3,277
	Unknown	1,875	---
18-19 years	Crops	73,121	2,728
	Livestock	83,698	2,948
	Unknown	1,498	---

**Table 2-52. National estimates of farm household youth less than 20 years of age by age group, type of farm, and sex: 1998.**

Age Group	Farm Type	Males		Females	
		Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>Crops</b>	<b>114,966</b>	<b>4,066</b>	<b>102,321</b>	<b>3,879</b>
	<b>Livestock</b>	<b>109,823</b>	<b>3,929</b>	<b>100,740</b>	<b>3,717</b>
	<b>Unknown</b>	<b>1,244</b>	<b>---</b>	<b>1,486</b>	<b>---</b>
<b>10-15 years</b>	<b>Crops</b>	<b>123,673</b>	<b>4,003</b>	<b>106,279</b>	<b>3,558</b>
	<b>Livestock</b>	<b>120,490</b>	<b>3,853</b>	<b>118,161</b>	<b>3,791</b>
	<b>Unknown</b>	<b>1,631</b>	<b>---</b>	<b>2,074</b>	<b>---</b>
10-11 years	Crops	34,406	1,803	30,884	1,713
	Livestock	34,191	1,839	36,435	1,935
	Unknown	499	---	517	---
12-13 years	Crops	40,803	2,031	36,312	1,883
	Livestock	40,599	2,061	41,399	2,062
	Unknown	540	---	679	---
14-15 years	Crops	48,463	2,352	39,083	1,973
	Livestock	45,700	2,102	42,385	2,041
	Unknown	592	---	877	---
<b>16-19 years</b>	<b>Crops</b>	<b>90,476</b>	<b>3,144</b>	<b>78,563</b>	<b>2,944</b>
	<b>Livestock</b>	<b>101,120</b>	<b>3,349</b>	<b>87,412</b>	<b>3,135</b>
	<b>Unknown</b>	<b>2,110</b>	<b>---</b>	<b>1,263</b>	<b>---</b>
16-17 years	Crops	50,787	2,242	45,130	2,111
	Livestock	55,847	2,317	48,987	2,228
	Unknown	1,099	---	776	---
18-19 years	Crops	39,689	1,987	33,432	1,844
	Livestock	45,273	2,141	38,425	1,963
	Unknown	1,011	---	487	---

**Table 2-53. National estimates of working farm household youth less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>118,297</b>	<b>4,022</b>
<b>10-15 years</b>	<b>336,456</b>	<b>6,851</b>
10-11 years	84,772	2,882
12-13 years	114,432	3,376
14-15 years	137,252	3,733
<b>16-19 years</b>	<b>272,441</b>	<b>5,611</b>
16-17 years	155,207	3,911
18-19 years	117,234	3,411

**Table 2-54. National estimates of working farm household youth less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>69,438</b>	<b>2,847</b>	<b>48,859</b>	<b>2,384</b>
<b>10-15 years</b>	<b>196,614</b>	<b>4,900</b>	<b>139,842</b>	<b>3,997</b>
10-11 years	48,152	2,152	36,620	1,893
12-13 years	65,953	2,592	48,479	2,152
14-15 years	82,510	2,937	54,742	2,288
<b>16-19 years</b>	<b>168,419</b>	<b>4,250</b>	<b>104,022</b>	<b>3,339</b>
16-17 years	94,332	3,009	60,875	2,441
18-19 years	74,086	2,726	43,148	2,062

**Table 2-55. National estimates of working farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>328,868</b>	<b>7,954</b>
Cash grains	202,695	6,528
Tobacco	27,394	2,525
Cotton	7,888	1,316
Vegetables	15,900	1,720
Fruits, nuts	17,370	1,422
Nursery	11,968	1,464
Other crops	45,650	2,791
<b>Livestock</b>	<b>392,796</b>	<b>8,889</b>
Beef cattle	205,863	6,358
Dairy	112,619	5,183
Hogs	28,213	2,656
Sheep, goats	11,009	1,358
Equine	13,782	1,459
Poultry, eggs	14,573	1,963
Other livestock	6,734	1,113
<b>Unknown</b>	<b>5,107</b>	<b>---</b>

**Table 2-56. National estimates of working farm household youth less than 20 years of age by type of farm and sex: 1998.**

Type of Farm	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>Crops</b>	<b>202,562</b>	<b>5,543</b>	<b>126,306</b>	<b>4,218</b>
Cash grains	128,508	4,613	74,187	3,330
Tobacco	17,547	1,822	9,847	1,251
Cotton	4,244	798	3,644	819
Vegetables	8,510	1,113	7,390	1,048
Fruits, nuts	10,528	968	6,842	739
Nursery	6,960	879	5,008	805
Other crops	26,266	1,847	19,384	1,595
<b>Livestock</b>	<b>229,019</b>	<b>5,820</b>	<b>163,777</b>	<b>4,981</b>
Beef cattle	122,423	4,254	83,440	3,546
Dairy	63,415	3,216	49,204	2,885
Hogs	16,491	1,622	11,722	1,446
Sheep, goats	6,105	850	--- <sup>1</sup>	--- <sup>1</sup>
Equine	7,659	969	6,123	839
Poultry, eggs	8,892	1,399	5,681	1,031
Other livestock	4,034	817	7,682	935
<b>Unknown</b>	<b>2,894</b>	<b>---</b>	<b>2,268</b>	<b>---</b>

<sup>1</sup> "Sheep, goats" are combined with "Other livestock" because the estimates for some female categories were not reportable.

**Table 2-57. National estimates of working farm household youth less than 20 years of age by age group and type of farm: 1998.**

Age Group	Farm Type	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>Crops</b>	<b>50,747</b>	<b>2,659</b>
	<b>Livestock</b>	<b>67,139</b>	<b>3,091</b>
	<b>Unknown</b>	<b>411</b>	<b>---</b>
<b>10-15 years</b>	<b>Crops</b>	<b>154,095</b>	<b>4,813</b>
	<b>Livestock</b>	<b>180,085</b>	<b>5,137</b>
	<b>Unknown</b>	<b>2,278</b>	<b>---</b>
10-11 years	Crops	37,158	1,940
	Livestock	47,040	2,166
	Unknown	574	---
12-13 years	Crops	52,153	2,318
	Livestock	61,678	2,508
	Unknown	600	---
14-15 years	Crops	64,783	2,683
	Livestock	71,366	2,657
	Unknown	1,104	---
<b>16-19 years</b>	<b>Crops</b>	<b>124,447</b>	<b>3,885</b>
	<b>Livestock</b>	<b>146,029</b>	<b>4,258</b>
	<b>Unknown</b>	<b>1,966</b>	<b>---</b>
16-17 years	Crops	70,666	2,683
	Livestock	83,112	2,919
	Unknown	1,428	---
18-19 years	Crops	53,780	2,365
	Livestock	62,917	2,530
	Unknown	537	---

**Table 2-58. National estimates of working farm household youth less than 20 years of age by age group, type of farm, and sex: 1998.**

Age Group	Farm Type	Males		Females	
		Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>Crops</b>	<b>29,816</b>	<b>1,917</b>	<b>20,931</b>	<b>1,570</b>
	<b>Livestock</b>	<b>39,323</b>	<b>2,138</b>	<b>27,816</b>	<b>1,810</b>
	<b>Unknown</b>	<b>299</b>	<b>---</b>	<b>112</b>	<b>---</b>
<b>10-15 years</b>	<b>Crops</b>	<b>94,273</b>	<b>3,541</b>	<b>59,822</b>	<b>2,620</b>
	<b>Livestock</b>	<b>101,155</b>	<b>3,511</b>	<b>78,930</b>	<b>3,067</b>
	<b>Unknown</b>	<b>1,187</b>	<b>---</b>	<b>1,091</b>	<b>---</b>
10-11 years	Crops	22,832	1,494	14,326	1,186
	Livestock	24,932	1,559	22,708	1,525
	Unknown	387	---	187	---
12-13 years	Crops	30,794	1,790	21,359	1,457
	Livestock	34,839	1,897	25,839	1,512
	Unknown	319	---	281	---
14-15 years	Crops	40,647	2,180	24,136	1,533
	Livestock	41,383	2,004	29,983	1,691
	Unknown	480	---	624	---
<b>16-19 years</b>	<b>Crops</b>	<b>78,471</b>	<b>2,974</b>	<b>45,976</b>	<b>2,230</b>
	<b>Livestock</b>	<b>88,539</b>	<b>3,137</b>	<b>57,490</b>	<b>2,531</b>
	<b>Unknown</b>	<b>1,408</b>	<b>---</b>	<b>558</b>	<b>---</b>
16-17 years	Crops	43,944	2,097	26,722	1,623
	Livestock	49,406	2,187	33,706	1,840
	Unknown	983	---	445	---
18-19 years	Crops	34,527	1,887	19,253	1,402
	Livestock	39,133	1,995	23,784	1,526
	Unknown	425	---	112	---

**Table 2-59. National estimates of hired farm workers less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>11,477</b>	<b>1,499</b>
<b>10-15 years</b>	<b>182,746</b>	<b>6,837</b>
10-11 years	16,620	1,441
12-13 years	44,365	2,536
14-15 years	121,886	4,961
<b>16-19 years</b>	<b>472,252</b>	<b>14,746</b>
16-17 years	265,587	8,339
18-19 years	206,664	7,150

**Table 2-60. National estimates of hired farm workers less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>8566</b>	<b>1,246</b>	<b>2,933</b>	<b>668</b>
<b>10-15 years</b>	<b>148,964</b>	<b>5,703</b>	<b>33,782</b>	<b>2,418</b>
10-11 years	13070	1,228	3,455	662
12-13 years	32,691	2,020	11,566	1,321
14-15 years	103,202	4,386	18,684	1,609
<b>16-19 years</b>	<b>419,536</b>	<b>11,527</b>	<b>52,716</b>	<b>3,322</b>
16-17 years	234,787	7,513	30,800	2,310
18-19 years	184,746	6,578	21,918	1,754



**Table 2-61. National estimates of hired farm workers less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>357,617</b>	<b>13,361</b>
Cash grains	146,913	7,599
Tobacco	51,795	5,525
Cotton	8,917	1,718
Vegetables	33,890	5,157
Fruits, nuts	41,425	5,495
Nursery	30,771	4,587
Other crops	43,905	3,574
<b>Livestock</b>	<b>305,038</b>	<b>10,216</b>
Beef cattle	165,396	7,235
Dairy	79,046	4,969
Hogs	16,958	2,732
Sheep, goats	8,680	1,313
Equine	14,836	2,367
Poultry, eggs	11,054	2,660
Other livestock	9,069	2,817
<b>Unknown</b>	<b>3,821</b>	<b>---</b>

**Table 2-62. National estimates of hired farm workers less than 20 years of age by type of farm and sex: 1998.**

Type of Farm	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>Crops</b>	<b>302,383</b>	<b>11,104</b>	<b>55,234</b>	<b>4,010</b>
Cash grains	131,361	6,561	15,552	1,936
Tobacco	43,904	4,674	7,891	1,619
Cotton	7,530	1,467	1,387	546
Vegetables	27,540	4,420	6,350	1,497
Fruits, nuts	29,536	3,704	11,889	2,337
Nursery	23,069	3,755	7,702	1,169
Other crops	38,545	3,087	5,360	1,027
<b>Livestock</b>	<b>271,367</b>	<b>9,305</b>	<b>33,671</b>	<b>2,388</b>
Beef cattle	149,124	6,734	16,272	1,453
Dairy	70,966	4,292	8,080	1,434
Hogs	15,079	2,414	1,879	593
Sheep, goats	7,921	1,266	--- <sup>1</sup>	--- <sup>1</sup>
Equine	10,446	1,915	4,390	785
Poultry, eggs	9,686	2,445	1,368	535
Other livestock	7,981	2,735	1,847	466
<b>Unknown</b>	<b>3,317</b>	<b>---</b>	<b>506</b>	<b>---</b>

<sup>1</sup> "Sheep, goats" are combined with "Other livestock" because the estimates for some female categories were not reportable.

**Table 2-63. National estimates of hired farm workers less than 20 years of age by age group and type of farm: 1998.**

Age Group	Farm Type	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>Crops</b>	<b>5,466</b>	<b>883</b>
	<b>Livestock</b>	<b>6,011</b>	<b>1,222</b>
<b>10-15 years</b>	<b>Crops</b>	<b>99,043</b>	<b>5,552</b>
	<b>Livestock</b>	<b>82,672</b>	<b>4,050</b>
	<b>Unknown</b>	<b>1,031</b>	<b>---</b>
10-11 years	Crops	7,933	996
	Livestock	8,592	1,042
12-13 years	Crops	22,985	1,957
	Livestock	20,911	1,609
	Unknown	361	---
14-15 years	Crops	68,126	4,063
	Livestock	53,090	2,876
	Unknown	670	---
<b>16-19 years</b>	<b>Crops</b>	<b>253,108</b>	<b>10,325</b>
	<b>Livestock</b>	<b>216,354</b>	<b>8,032</b>
	<b>Unknown</b>	<b>2,790</b>	<b>---</b>
16-17 years	Crops	140,573	6,415
	Livestock	123,307	5,468
	Unknown	1,707	---
18-19 years	Crops	112,534	5,666
	Livestock	93,047	4,441
	Unknown	1,083	---

**Table 2-64. National estimates of hired farm workers less than 20 years of age by age group, type of farm, and sex: 1998.**

Age Group	Farm Type	Males		Females	
		Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>Crops</b>	<b>3,904</b>	<b>666</b>	<b>1,562</b>	<b>562</b>
	<b>Livestock</b>	<b>4,662</b>	<b>1,068</b>	<b>1,349</b>	<b>361</b>
<b>10-15 years</b>	<b>Crops</b>	<b>79,360</b>	<b>4,555</b>	<b>19,683</b>	<b>1,945</b>
	<b>Livestock</b>	<b>68,929</b>	<b>3,485</b>	<b>13,743</b>	<b>1,411</b>
	<b>Unknown</b>	<b>675</b>	<b>---</b>	<b>356</b>	<b>---</b>
10-11 years	Crops	6,441	878	1,492	452
	Livestock	6,629	858	1,963	482
12-13 years	Crops	17,076	1,520	5,909	1,042
	Livestock	15,422	1,333	5,489	783
	Unknown	193	---	168	---
14-15 years	Crops	55,842	3,524	12,284	1,073
	Livestock	46,878	2,641	6,212	885
	Unknown	482	---	188	---
<b>16-19 years</b>	<b>Crops</b>	<b>219,118</b>	<b>8,852</b>	<b>33,990</b>	<b>2,973</b>
	<b>Livestock</b>	<b>197,776</b>	<b>7,621</b>	<b>18,578</b>	<b>1,525</b>
	<b>Unknown</b>	<b>2,642</b>	<b>---</b>	<b>148</b>	<b>---</b>
16-17 years	Crops	119,915	5,515	20,658	2,019
	Livestock	113,209	5,187	10,098	1,150
	Unknown	1,663	---	44	---
18-19 years	Crops	99,203	5,091	13,331	1,497
	Livestock	84,566	4,254	8,481	900
	Unknown	977	---	106	---

**Table 2-65. National estimates of all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>129,774</b>	<b>4,374</b>
<b>10-15 years</b>	<b>519,204</b>	<b>9,909</b>
10-11 years	101,297	3,242
12-13 years	158,688	4,300
14-15 years	258,949	6,349
<b>16-19 years</b>	<b>744,694</b>	<b>14,450</b>
16-17 years	420,794	9,468
18-19 years	323,900	8,130

<sup>1</sup> All household workers and hired workers combined.

**Table 2-66. National estimates of all farm workers<sup>1</sup> less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>78,004</b>	<b>3152</b>	<b>51,770</b>	<b>2,500</b>
<b>10-15 years</b>	<b>345,579</b>	<b>7,714</b>	<b>173,512</b>	<b>4,699</b>
10-11 years	61,221	2492	40,115	2,004
12-13 years	98,643	3354	60,045	2,570
14-15 years	185,712	5386	73,242	2,819
<b>16-19 years</b>	<b>587,954</b>	<b>12,489</b>	<b>156,740</b>	<b>4,820</b>
16-17 years	329,120	8294	91,529	3,401
18-19 years	258,831	7196	65,008	2,791

<sup>1</sup> All household workers and hired workers combined.

**Table 2-67. National estimates of all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>686,714</b>	<b>16,459</b>
Cash grains	349,883	10,754
Tobacco	79,241	6,734
Cotton	16,810	2,349
Vegetables	49,819	5,690
Fruits, nuts	58,818	5,879
Nursery	42,683	4,914
Other crops	89,458	4,895
<b>Livestock</b>	<b>698,059</b>	<b>14,473</b>
Beef cattle	371,229	10,159
Dairy	191,812	7,980
Hogs	45,229	4,427
Sheep, goats	19,713	2,099
Equine	28,642	2,948
Poultry, eggs	25,620	3,728
Other livestock	15,814	3,082
<b>Unknown</b>	<b>8,472</b>	<b>---</b>

<sup>1</sup> All household workers and hired workers combined.

**Table 2-68. National estimates of all farm workers<sup>1</sup> less than 20 years of age by type of farm and sex: 1998.**

Type of Farm	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>Crops</b>	<b>504,945</b>	<b>13,040</b>	<b>181,540</b>	<b>5,981</b>
Cash grains	259,869	8,552	89,739	3,935
Tobacco	61,451	5,503	17,738	2,148
Cotton	11,774	1,763	5,031	1,052
Vegetables	36,050	4,731	13,740	1,849
Fruits, nuts	40,064	3,935	18,731	2,543
Nursery	30,029	3,940	12,710	1,486
Other crops	64,811	3,777	24,744	1,973
<b>Livestock</b>	<b>500,386</b>	<b>11,563</b>	<b>197,448</b>	<b>5,660</b>
Beef cattle	271,547	8,328	99,712	3,900
Dairy	134,381	5,887	57,284	3,345
Hogs	31,570	3,218	13,601	1,699
Sheep, goats	14,026	1,676	--- <sup>2</sup>	--- <sup>2</sup>
Equine	18,105	2,277	10,513	1,149
Poultry, eggs	18,578	3,140	7,049	1,207
Other livestock	12,015	2,865	9,529	1,067
<b>Unknown</b>	<b>6,211</b>	<b>---</b>	<b>2,774</b>	<b>---</b>

<sup>1</sup> All household workers and hired workers combined.  
<sup>2</sup> "Sheep, goats" are combined with "Other livestock" because the estimates for some female categories were not reportable.

**Table 2-69. National estimates of all farm workers<sup>1</sup> less than 20 years of age by age group and type of farm: 1998.**

Age Group	Farm Type	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>Crops</b>	<b>56,213</b>	<b>2,842</b>
	<b>Livestock</b>	<b>73,150</b>	<b>3,370</b>
	<b>Unknown</b>	<b>411</b>	<b>---</b>
<b>10-15 years</b>	<b>Crops</b>	<b>253,138</b>	<b>7,709</b>
	<b>Livestock</b>	<b>262,757</b>	<b>6,716</b>
	<b>Unknown</b>	<b>3,309</b>	<b>---</b>
10-11 years	Crops	45,091	2,198
	Livestock	55,632	2,416
	Unknown	574	---
12-13 years	Crops	75,138	3,149
	Livestock	82,589	3,019
	Unknown	961	---
14-15 years	Crops	132,909	5,056
	Livestock	124,456	4,012
	Unknown	1,774	---
<b>16-19 years</b>	<b>Crops</b>	<b>377,555</b>	<b>11,378</b>
	<b>Livestock</b>	<b>362,383</b>	<b>9,578</b>
	<b>Unknown</b>	<b>4,756</b>	<b>---</b>
16-17 years	Crops	211,239	7,166
	Livestock	206,419	6,495
	Unknown	3,135	---
18-19 years	Crops	166,314	6,307
	Livestock	155,964	5,332
	Unknown	1,620	---

<sup>1</sup> All household workers and hired workers combined.



**Table 2-70. National estimates of all farm workers<sup>1</sup> less than 20 years of age by age group, type of farm, and sex: 1998.**

Age Group	Farm Type	Males		Females	
		Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>Crops</b>	<b>33,720</b>	<b>2,051</b>	<b>22,493</b>	<b>1,695</b>
	<b>Livestock</b>	<b>43,985</b>	<b>2,434</b>	<b>29,165</b>	<b>1,860</b>
	<b>Unknown</b>	<b>299</b>	<b>---</b>	<b>112</b>	<b>---</b>
<b>10-15 years</b>	<b>Crops</b>	<b>173,633</b>	<b>6,028</b>	<b>79,505</b>	<b>3,323</b>
	<b>Livestock</b>	<b>170,084</b>	<b>5,088</b>	<b>92,673</b>	<b>3,399</b>
	<b>Unknown</b>	<b>1,862</b>	<b>---</b>	<b>1,447</b>	<b>---</b>
10-11 years	Crops	29,273	1,750	15,818	1,267
	Livestock	31,561	1,789	24,071	1,560
	Unknown	387	---	187	---
12-13 years	Crops	47,870	2,433	27,268	1831
	Livestock	50,261	2,346	32,328	1796
	Unknown	512	---	449	---
14-15 years	Crops	96,489	4,290	36,420	2057
	Livestock	88,261	3,373	36,195	1925
	Unknown	962	---	812	---
<b>16-19 years</b>	<b>Crops</b>	<b>297,589</b>	<b>9,551</b>	<b>79,966</b>	<b>5982</b>
	<b>Livestock</b>	<b>286,315</b>	<b>8,507</b>	<b>76,068</b>	<b>3027</b>
	<b>Unknown</b>	<b>4,050</b>	<b>---</b>	<b>706</b>	<b>---</b>
16-17 years	Crops	163,859	6,082	47,380	2613
	Livestock	162,615	5,814	43,804	2509
	Unknown	2,646	---	489	---
18-19 years	Crops	133,730	5,495	32,584	2131
	Livestock	123,679		32,265	
	Unknown	1,402	---	218	---

<sup>1</sup> All household workers and hired workers combined.

**Table 2-71. National estimates of farm injury rates per 100 youth less than 20 years of age: 1998.**

Relationship to Farm	Injuries	Youth	Rate/100 youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>25,768</b>	<b>1,930,306</b>	<b>1.33</b>	<b>0.10</b>
<b>Farm household</b>	<b>23,640</b>	<b>1,263,830</b>	<b>1.87</b>	<b>0.15</b>
Working	10,254	727,194	1.41	0.16
Non-working	13,386	1,263,830	1.06	0.10
<b>All farm workers<sup>2</sup></b>	<b>12,382</b>	<b>1,393,670</b>	<b>0.89</b>	<b>0.09</b>
Hired workers	2,127	666,476	0.32	0.06

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 2-72. National estimates of farm injury rates per 100 youth less than 20 years of age by sex and relationship to farm: 1998.**

Sex and Relationship to Farm	Injuries	Youth	Rate/100 youth	Standard Error
<b>Males</b>				
<b>All farm youth<sup>1</sup></b>	<b>20,334</b>	<b>1,242,599</b>	<b>1.64</b>	<b>0.14</b>
<b>Farm household</b>	<b>18,307</b>	<b>665,533</b>	<b>2.75</b>	<b>0.24</b>
Working	8,786	434,475	2.02	0.25
Non-working	9,521	665,533	1.43	0.15
<b>All farm workers<sup>2</sup></b>	<b>10,813</b>	<b>1,011,843</b>	<b>1.07</b>	<b>0.12</b>
<b>Females</b>				
<b>All farm youth<sup>1</sup></b>	<b>5,434</b>	<b>687,707</b>	<b>0.79</b>	<b>0.10</b>
<b>Farm household</b>	<b>5,333</b>	<b>598,297</b>	<b>0.09</b>	<b>0.01</b>
Working	1,468	292,719	0.50	0.12
Non-working	3,865	598,297	0.65	0.10
<b>All farm workers<sup>2</sup></b>	<b>1,569</b>	<b>381,827</b>	<b>0.41</b>	<b>0.10</b>

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 2-73. National estimates of farm injury rates per 100 youth for all farm youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/ 100 youth	Standard Error
<b>&lt;10 years</b>	<b>8,738</b>	<b>436,019</b>	<b>2.00</b>	<b>0.22</b>
<b>10-15 years</b>	<b>10,357</b>	<b>658,015</b>	<b>1.57</b>	<b>0.23</b>
10-11 years	2,843	154,453	1.84	0.39
12-13 years	4,166	203,900	2.04	0.43
14-15 years	3,348	299,662	1.12	0.30
<b>16-19 years</b>	<b>6,674</b>	<b>836,272</b>	<b>0.80</b>	<b>0.18</b>
16-17 years	3,036	470,101	0.65	0.20
18-19 years	3,638	366,171	0.99	0.30

<sup>1</sup> All household youth and hired youth combined.

**Table 2-74. National estimates of farm injury rates per 100 youth for farm household youth less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/ 100 youth	Standard Error
<b>&lt;10 years</b>	<b>8,738</b>	<b>430,580</b>	<b>2.03</b>	<b>0.23</b>
<b>10-15 years</b>	<b>9,932</b>	<b>472,307</b>	<b>2.10</b>	<b>0.23</b>
10-11 years	2,843	136,931	2.08	0.39
12-13 years	4,041	158,275	2.55	0.43
14-15 years	3,048	177,101	1.72	0.33
<b>16-19 years</b>	<b>4,971</b>	<b>360,943</b>	<b>1.38</b>	<b>0.21</b>
16-17 years	2,288	202,626	1.13	0.22
18-19 years	2,683	158,318	1.69	0.29

**Table 2-75. National estimates of farm injury rates per 100 youth for all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/ 100 youth	Standard Error
<b>&lt;10 years</b>	<b>1,818</b>	<b>129,774</b>	<b>1.40</b>	<b>0.33</b>
<b>10-15 years</b>	<b>4,828</b>	<b>519,204</b>	<b>0.93</b>	<b>0.15</b>
10-11 years	1,307	101,297	1.29	0.37
12-13 years	1,719	158,688	1.08	0.28
14-15 years	1,802	258,949	0.70	0.15
<b>16-19 years</b>	<b>5,736</b>	<b>744,694</b>	<b>0.77</b>	<b>0.11</b>
16-17 years	2,507	420,794	0.60	0.12
18-19 years	3,229	323,900	1.00	0.18

<sup>1</sup> All household workers and hired workers combined.

**Table 2-76. National estimates of farm injury rates per 100 youth less than 20 years of age by type of farm and relationship to farm: 1998.**

Type of Farm and Relationship to Farm	Injuries	Youth	Rate/ 100 youth	Standard Error
<b>Crops</b>				
<b>All farm youth<sup>1</sup></b>	<b>10,668</b>	<b>973,894</b>	<b>1.10</b>	<b>0.12</b>
Farm household	9,811	616,277	1.59	0.17
All farm workers <sup>2</sup>	4,061	686,714	.059	0.09
<b>Livestock</b>				
<b>All farm youth<sup>1</sup></b>	<b>15,100</b>	<b>942,784</b>	<b>1.60</b>	<b>0.16</b>
Farm household	13,829	637,746	2.17	0.22
All farm workers <sup>2</sup>	8,321	698,059	1.19	0.16

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 2-77. Regional estimates of farm injury rates per 100 youth for all farm youth<sup>1</sup> less than 20 years of age: 1998.**

Region	Injuries	Youth	Rate/ 100 youth	Standard Error
Northeast	1,995	165,640	1.20	0.15
Midwest	12,040	905,251	1.33	0.17
South	7,569	556,871	1.36	0.20
West	4,174	302,544	1.38	0.14

<sup>1</sup> All household youth and hired youth combined.

**Table 2-78. Regional estimates of farm injury rates per 100 youth for farm household youth less than 20 years of age by sex: 1998.**

Region and Sex	Injuries	Youth	Rate/ 100 youth	Standard Error
<b>Northeast</b>				
Males	1,318	49,192	2.68	0.42
Females	337	45,492	0.74	0.17
<b>Midwest</b>				
Males	8,926	331,202	2.70	0.38
Females	2,232	301,153	0.74	0.16
<b>South</b>				
Males	5,115	186,052	2.75	0.51
Females	1,943	166,345	1.17	0.29
<b>West</b>				
Males	2,948	99,086	2.98	0.36
Females	821	85,308	0.96	0.20

Section III:  
Regional Injury and  
Demographic Data



**Table 3-1. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Youth Injuries	Standard Error
<b>All youth<sup>1</sup></b>	<b>2,458</b>	<b>262</b>
Working	1,207	160
Non-working	1,251	180
Visitors	462	100
<b>All farm youth<sup>2</sup></b>	<b>1,996</b>	<b>240</b>
<b>Farm household</b>	<b>1,655</b>	<b>216</b>
Working	750	123
Non-working	905	156
<b>All farm workers<sup>3</sup></b>	<b>1,091</b>	<b>164</b>
Hired workers	341	82

- <sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.  
<sup>2</sup> All household youth and hired youth combined.  
<sup>3</sup> All household workers and hired workers combined.

**Table 3-2. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Youth Injuries	Standard Error	Youth Injuries	Standard Error
<b>All youth<sup>1</sup></b>	<b>1,992</b>	<b>242</b>	<b>466</b>	<b>92</b>
Working	1,078	153	129	49
Non-working	914	157	337	79
<b>Farm household</b>	<b>1,318</b>	<b>201</b>	<b>337</b>	<b>77</b>

- <sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.



**Table 3-3. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	735	136
10-15 years	806	161
16-19 years	917	139

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-4. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>540</b>	<b>151</b>
<b>Livestock</b>	<b>1,878</b>	<b>214</b>
Beef cattle	260	72
Dairy	1,199	164
All other livestock	420	118
<b>Unknown</b>	<b>40</b>	<b>---</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-5. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Bruise, contusion	300	82
Sprain, strain, torn ligament	200	63
Broken bone, fracture	659	114
Cut, laceration	600	105
Other injuries	639	120
Unknown	140	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-6. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by body part injured: 1998.**

Body Part Injured	Youth Injuries	Standard Error
Head, skull	260	72
Face	180	60
Shoulder, chest, back	160	56
Arm	360	85
Hand, wrist, fingers	679	132
Leg	280	80
Foot, ankle, toes	360	85
Other body parts	120	49
Unknown	60	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-7. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by source of injury: 1998.**

Source of Injury	Youth Injuries	Standard Error
Agricultural, garden machinery	200	69
Animals, animal products	280	75
Floors, walkways, ground surfaces	599	113
Other injury sources	1,259	190
Unknown	120	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-8. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Contact with object	200	63
Struck by object	420	91
Fall, unspecified	220	66
Fall to lower level	360	89
Fall on same level	160	56
Non-highway accident, except rail, air, water	220	66
Assaults by animals	260	72
Other events	478	97
Unknown	140	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-9. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of injury and body part injured: 1998.**

Type of Injury	Body Part	Youth Injuries	Standard Error
Broken bone, fracture	Arm	200	63
	Foot, ankle, toes	160	56
Cut, lacerations	Head, skull	160	56
	Hand, wrist, fingers	240	69
Other injuries	Other body parts	1,638	201
Unknown	Unknown	60	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-10. Northeast regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by source of injury and injury event: 1998.**

Source of Injury	Injury Event	Youth Injuries	Standard Error
Animals, animal products	Assaults by animals	260	72
Floors, walkways, ground surfaces	Falls, unspecified	180	59
	Fall to lower level	320	85
Other sources	Other events	1,578	210
Unknown	Unknown	120	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-11. Northeast regional estimates of farm injuries to all farm youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	645	128
10-15 years	617	144
16-19 years	734	121

<sup>1</sup> All household youth and hired youth combined.

**Table 3-12. Northeast regional estimates of farm injuries to farm household youth less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	345	128
10-15 years	521	126
16-19 years	489	100

**Table 3-13. Northeast regional estimates of farm injuries to farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>320</b>	<b>114</b>
<b>Livestock</b>	<b>1,319</b>	<b>180</b>
Beef cattle	160	56
Dairy	859	137
All other livestock	300	104
<b>Unknown</b>	<b>20</b>	<b>---</b>

**Table 3-14. Northeast regional estimates of farm injuries to farm household youth less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Bruise, contusion	220	72
Broken bone, fracture	500	100
Cut, laceration	300	77
Other injuries	599	113

**Table 3-15. Northeast regional estimates of farm injuries to farm household youth less than 20 years of age by body part injured: 1998.**

Body Part Injured	Youth Injuries	Standard Error
Head, skull	180	60
Arm	280	75
Hand, wrist, fingers	420	111
Foot, ankle, toes	260	72
Other body parts	479	102

**Table 3-16. Northeast regional estimates of farm injuries to farm household youth less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Struck by object	340	82
Fall, unspecified	160	56
Fall to lower level	320	85
Non-highway accident, except rail, air, water	180	60
Other events	599	117
Unknown	20	---

**Table 3-17. Northeast regional estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<16 years <sup>2</sup>	425	93
16-19 years	666	115

<sup>1</sup> All household workers and hired workers combined.

<sup>2</sup> One or more age groups below 16 years of age for all farm workers were not reportable.

**Table 3-18. Northeast regional estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>180</b>	<b>59</b>
<b>Livestock</b>	<b>819</b>	<b>126</b>
Dairy	699	118
<b>Unknown</b>	<b>20</b>	<b>---</b>

<sup>1</sup> All household workers and hired workers combined.



**Table 3-19. Northeast regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>165,064</b>	<b>4,028</b>
<b>Farm household</b>	<b>94,684</b>	<b>2,085</b>
Working	61,389	1,683
Non-working	33,295	1,103
<b>All farm workers<sup>2</sup></b>	<b>131,769</b>	<b>3,839</b>
Hired workers	70,380	3,427

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-20. Northeast regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>106,349</b>	<b>3,062</b>	<b>58,715</b>	<b>1,644</b>
<b>Farm household</b>	<b>49,192</b>	<b>1,266</b>	<b>45,492</b>	<b>1,242</b>
Working	34,457	1,070	26,932	966
Non-working	14,735	644	18,560	738
<b>All farm workers<sup>2</sup></b>	<b>91,614</b>	<b>2,993</b>	<b>40,155</b>	<b>1,444</b>
Hired workers	57,157	2,797	13,223	1,041

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-21. Northeast regional estimates of farm household youth less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>32,285</b>	<b>1,148</b>
<b>10-15 years</b>	<b>35,534</b>	<b>1,039</b>
10-11 years	10,701	468
12-13 years	12,021	494
14-15 years	12,813	513
<b>16-19 years</b>	<b>26,864</b>	<b>816</b>
16-17 years	14,518	535
18-19 years	12,346	496

**Table 3-22. Northeast regional estimates of farm household youth less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>16,275</b>	<b>696</b>	<b>16,010</b>	<b>708</b>
<b>10-15 years</b>	<b>18,251</b>	<b>677</b>	<b>17,283</b>	<b>657</b>
10-11 years	5,378	331	5,323	329
12-13 years	6,050	351	5,971	348
14-15 years	6,824	372	5,989	349
<b>16-19 years</b>	<b>14,666</b>	<b>577</b>	<b>12,198</b>	<b>518</b>
16-17 years	7,455	386	7,063	376
18-19 years	7,211	380	5,135	318

**Table 3-23. Northeast regional estimates of farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>29,605</b>	<b>1,240</b>
Cash grains	6,924	626
Vegetables	4,366	528
Fruits, nuts	2,701	367
Nursery	6,071	581
Other crops	9,543	717
<b>Livestock</b>	<b>64,591</b>	<b>1,877</b>
Beef cattle	12,143	796
Dairy	41,240	1,627
Hogs	1,198	267
Sheep, goats	2,335	394
Equine	2,411	274
Poultry, eggs	2,234	422
Other livestock	2,031	320
<b>Unknown</b>	<b>487</b>	<b>---</b>

**Table 3-24. Northeast regional estimates of working farm household youth less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>11,675</b>	<b>619</b>
<b>10-15 years</b>	<b>28,626</b>	<b>962</b>
10-11 years	7,824	404
12-13 years	9,841	456
14-15 years	10,962	476
<b>16-19 years</b>	<b>21,088</b>	<b>730</b>
16-17 years	11,573	485
18-19 years	9,514	438

**Table 3-25. Northeast regional estimates of working farm household youth less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;16 years</b>	<b>21,905</b>	<b>829</b>	<b>18,396</b>	<b>782</b>
<14 years <sup>1</sup>	15,935	696	13,404	648
14-15 years	5,970	346	4,992	324
<b>16-19 years</b>	<b>12,552</b>	<b>539</b>	<b>8,536</b>	<b>442</b>
16-17 years	6,541	367	5,032	323
18-19 years	6,011	348	3,503	265

<sup>1</sup>

One or more age groups below 14 years of age for family or hired workers were not reportable.

**Table 3-26. Northeast regional estimates of working farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>17,176</b>	<b>925</b>
Cash grains	4,034	454
Vegetables	2,954	439
Fruits, nuts	1,446	256
Nursery	3,178	398
Other crops	5,562	523
<b>Livestock</b>	<b>44,009</b>	<b>1,499</b>
Beef cattle	7,967	608
Dairy	28,525	1,297
Sheep, goats	1,508	285
Equine	2,425	322
Poultry, eggs	1,589	333
Other livestock	1,997	296
<b>Unknown</b>	<b>204</b>	<b>---</b>

**Table 3-27. Northeast regional estimates of hired farm workers less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>1,176</b>	<b>215</b>
<b>10-15 years</b>	<b>19,769</b>	<b>1,219</b>
10-11 years	1,176	162
12-13 years	3,528	322
14-15 years	15,066	1,043
<b>16-19 years</b>	<b>49,435</b>	<b>2,548</b>
16-17 years	30,964	1,733
18-19 years	18,471	1,180

**Table 3-28. Northeast regional estimates of hired farm workers less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;16 years</b>	<b>16,965</b>	<b>1,044</b>	<b>3,980</b>	<b>414</b>
<14 years <sup>1</sup>	4,744	415	1,136	177
14-15 years	12,221	837	2,844	353
<b>16-19 years</b>	<b>40,191</b>	<b>2,143</b>	<b>9,244</b>	<b>799</b>
16-17 years	24,592	1,399	6,373	623
18-19 years	15,600	1,037	2,871	316

<sup>1</sup> One or more age groups below 14 years of age for family or hired workers were not reportable.

**Table 3-29. Northeast regional estimates of hired farm workers less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>35,230</b>	<b>3,017</b>
Cash grains	4,356	706
Vegetables	7,374	1,229
Fruits, nuts	5,535	1,021
Nursery	11,530	2,326
Other crops	6,435	902
<b>Livestock</b>	<b>34,830</b>	<b>1,751</b>
Beef cattle	6,035	672
Dairy	22,041	1,305
Sheep, goats	1,079	259
Equine	2,438	503
Poultry, eggs	879	275
Other livestock	2,358	799
<b>Unknown</b>	<b>320</b>	<b>---</b>

**Table 3-30. Northeast regional estimates of all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>12,851</b>	<b>660</b>
<b>10-15 years</b>	<b>48,395</b>	<b>1,563</b>
10-11 years	9,000	437
12-13 years	13,369	562
14-15 years	26,028	1,148
<b>16-19 years</b>	<b>70,523</b>	<b>2,696</b>
16-17 years	42,537	1,794
18-19 years	27,985	1,280

<sup>1</sup> All household workers and hired workers combined.

**Table 3-31. Northeast regional estimates of all farm workers<sup>1</sup> less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>7,333</b>	<b>460</b>	<b>5,518</b>	<b>374</b>
<b>10-15 years</b>	<b>31,537</b>	<b>1,168</b>	<b>16,858</b>	<b>731</b>
10-11 years	5,203	331	3,797	284
12-13 years	8,143	430	5,225	336
14-15 years	18,191	911	7,836	483
<b>16-19 years</b>	<b>52,743</b>	<b>2,209</b>	<b>17,780</b>	<b>929</b>
16-17 years	31,133	1,439	11,405	711
18-19 years	21,611	1,104	6,374	420

<sup>1</sup> All household workers and hired workers combined.



**Table 3-32. Northeast regional estimates of all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>52,406</b>	<b>3,245</b>
Cash grains	8,390	881
Vegetables	10,328	1,367
Fruits, nuts	6,981	1,128
Nursery	14,708	2,399
Other crops	11,996	1,957
<b>Livestock</b>	<b>78,839</b>	<b>2,387</b>
Beef cattle	14,002	971
Dairy	50,566	1,950
Hogs	1,195	290
Sheep, goats	2,587	413
Equine	4,863	631
Poultry, eggs	2,468	461
Other livestock	3,160	838
<b>Unknown</b>	<b>524</b>	<b>---</b>

<sup>1</sup> All household workers and hired workers combined.

**Table 3-33. Northeast regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to farm, type of farm and sex: 1998.**

Relationship to Farm	Farm Type	Males		Females	
		Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>Household</b>	<b>Crops</b>	<b>15,195</b>	<b>733</b>	<b>14,410</b>	<b>808</b>
	<b>Livestock</b>	<b>33,691</b>	<b>1,119</b>	<b>30,900</b>	<b>1,085</b>
	<b>Unknown</b>	<b>306</b>	<b>---</b>	<b>181</b>	<b>---</b>
Working	Crops	9,394	559	7,782	545
	Livestock	24,921	956	19,088	830
	Unknown	143	---	61	---
Non-Working	Crops	5,801	429	6,628	441
	Livestock	8,770	494	11,812	616
	Unknown	163	---	120	---
<b>All Farm Workers<sup>2</sup></b>	<b>Crops</b>	<b>36,335</b>	<b>2,558</b>	<b>16,701</b>	<b>1,102</b>
	<b>Livestock</b>	<b>54,817</b>	<b>1,760</b>	<b>24,022</b>	<b>1,050</b>
	<b>Unknown</b>	<b>463</b>	<b>---</b>	<b>61</b>	<b>---</b>
Hired workers	Crops	26,941	2,460	8,289	860
	Livestock	29,896	960	4,934	602
	Unknown	320	---	0	---

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-34. Northeast regional estimates of farm injury rates per 100 youth less than 20 years of age: 1998.**

Relationship to Farm	Injuries	Youth	Rate/100 youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>1,996</b>	<b>165,064</b>	<b>1.21</b>	<b>0.15</b>
<b>Farm household</b>	<b>1,655</b>	<b>94,684</b>	<b>1.75</b>	<b>0.23</b>
Working	750	61,389	1.22	0.20
Non-working	905	94,684	0.96	0.17
<b>All farm workers<sup>2</sup></b>	<b>1,091</b>	<b>131,769</b>	<b>0.83</b>	<b>0.13</b>

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-35. Northeast regional estimates of farm injury rates for farm household youth less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/100 Youth	Standard Error
<10 years	345	32,285	1.07	0.40
10-15 years	521	35,534	1.47	0.36
16-19 years	489	26,864	1.82	0.38

**Table 3-36. Northeast regional estimates of farm injury rates for all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/100 Youth	Standard Error
<10 years	100	12,851	0.78	0.35
10-15 years	325	48,395	0.67	0.17
16-19 years	666	70,523	0.94	0.17

<sup>1</sup> All household workers and hired workers combined.

**Table 3-37. Northeast regional estimates of farm injury rates per 100 youth less than 20 years of age by type of farm and relationship to farm: 1998.**

Farm Type and Relationship to Farm	Injuries	Youth	Rate / 100 youth	Standard Error
<b>Crops</b>				
Farm household	320	29,605	1.08	0.39
All farm workers <sup>1</sup>	180	52,406	0.34	0.05
<b>Livestock</b>				
Farm household	1,319	64,591	2.04	0.68
All farm workers <sup>1</sup>	819	78,839	1.04	0.16

<sup>1</sup> All household workers and hired workers combined.

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**Table 3-38. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Youth Injuries	Standard Error
<b>All youth<sup>1</sup></b>	<b>16,443</b>	<b>1,824</b>
Working	7,506	1,031
Non-working	8,937	1,228
Visitors	4,403	730
<b>All farm youth<sup>2</sup></b>	<b>12,040</b>	<b>1,526</b>
<b>Farm household</b>	<b>11,158</b>	<b>1,428</b>
Working	5,225	866
Non-working	5,933	931
<b>All farm workers<sup>3</sup></b>	<b>6,107</b>	<b>932</b>
Hired workers	882	312

- <sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.  
<sup>2</sup> All household youth and hired youth combined.  
<sup>3</sup> All household workers and hired workers combined.

**Table 3-39. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Youth Injuries	Standard Error	Youth Injuries	Standard Error
<b>All youth<sup>1</sup></b>	<b>13,493</b>	<b>1,604</b>	<b>2,950</b>	<b>565</b>
Working	6,917	1,007	589	240
Non-working	6,576	1,012	2,361	512
<b>Farm household</b>	<b>8,926</b>	<b>1,227</b>	<b>2,232</b>	<b>484</b>

- <sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-40. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	6,237	904
10-15 years	6,191	948
16-19 years	3,985	727

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-41. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>6,358</b>	<b>860</b>
Cash grains	5,152	780
All other crops	1,206	363
<b>Livestock</b>	<b>7,564</b>	<b>1,007</b>
Beef cattle	2,960	569
Dairy	3,069	675
All other livestock	1,535	490
<b>Unknown</b>	<b>2,521</b>	<b>---</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-42. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Scrape,abrasion	2,083	477
Bruise,contusion	1,206	363
Sprain,strain,torn ligament	1,206	395
Broken bone,fracture	2,192	490
Cut,laceration	4,494	717
Multiple injuries	987	363
Other injuries	2,302	525
Unknown	1,973	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-43. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by body part injured: 1998.**

Body Part Injured	Youth Injuries	Standard Error
Head,skull	2,083	477
Face	1,425	395
Arm	1,096	346
Hand,wrist,fingers	3,069	579
Leg	1,864	477
Foot,ankle,toes	2,192	514
Multiple body parts	987	363
Other body parts	1,754	438
Unknown	1,973	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.



**Table 3-44. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by source of injury: 1998.**

Source of Injury	Youth Injuries	Standard Error
Animals, animal products	1,206	363
Floors, walkways, ground surfaces	3,398	609
Other sources	8,551	1,173
Unknown	3,288	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-45. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Contact with object	1,425	395
Struck against object	1,315	410
Struck by object	1,315	379
Fall to lower level	2,192	490
Non-highway accident, except rail, air, water	2,412	536
Assaults by animals	1,206	363
Other events	3,509	809
Unknown	3,069	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-46. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of injury and body part injured: 1998.**

Type of Injury	Body Part	Youth Injuries	Standard Error
Scrape,abrasion	Head,skull	877	310
Cut,lacerations	Face	877	310
	Hand,wrist,fingers	1,425	395
Other injuries	Other body parts	11,290	1,198
Unknown	Unknown	1,974	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-47. Midwest regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by source of injury and injury event: 1998.**

Source of Injury	Injury Event	Youth Injuries	Standard Error
Animals,animal products	Assaults by animals	1,096	346
Floors,walkways,ground surfaces	Fall to lower level	2,192	490
Other sources	Other events	9,866	1,253
Unknown	Unknown	3,289	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-48. Midwest regional estimates of farm injuries to all farm youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	4,289	741
10-15 years	4,698	777
16-19 years	3,053	648

<sup>1</sup> All household youth and hired youth combined.

**Table 3-49. Midwest regional estimates of farm injuries to farm household youth less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	4,289	741
10-15 years	4,403	728
16-19 years	2,466	591

**Table 3-50. Midwest regional estimates of farm injuries to farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>4,494</b>	<b>718</b>
Cash grains	3,617	648
All other crops	877	310
<b>Livestock</b>	<b>5,590</b>	<b>903</b>
Beef cattle	1,973	465
Dairy	2,521	627
All other livestock	1,096	471
<b>Unknown</b>	<b>329</b>	<b>---</b>

**Table 3-51. Midwest regional estimates of farm injuries to farm household youth less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Scrape,abrasion	1,644	474
Sprain,strain,torn ligament	1,096	403
Broken bone,fracture	1,315	379
Cut,laceration	3,398	628
Other injuries	2,632	600
Unknown	219	---

**Table 3-52. Midwest regional estimates of farm injuries to farm household youth less than 20 years of age by body part injured: 1998.**

Body Part Injured	Youth Injuries	Standard Error
Head,skull	1,644	456
Hand,wrist,fingers	1,864	451
Leg	1,096	380
Foot,ankle,toes	1,864	451
Other body parts	3,917	724
Unknown	219	---

**Table 3-53. Midwest regional estimates of farm injuries to farm household youth less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Struck by object	1,206	363
Fall to lower level	1,425	395
Non-highway accident, except rail, air, water	1,644	424
Other events	4,714	794
Unknown	1,315	---

**Table 3-54. Midwest regional estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	1,211	364
10-15 years	2,225	521
16-19 years	2,671	608

<sup>1</sup> All household workers and hired workers combined.

**Table 3-55. Midwest regional estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>2,741</b>	<b>598</b>
Cash grains	2,412	568
<b>Livestock</b>	<b>3,179</b>	<b>681</b>
Beef cattle	1,096	346
Dairy	1,535	490
All other livestock	548	335
<b>Unknown</b>	<b>328</b>	<b>---</b>

<sup>1</sup> All household workers and hired workers combined.

**Table 3-56. Midwest regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>904,763</b>	<b>16,349</b>
<b>Farm household</b>	<b>632,355</b>	<b>11,566</b>
Working	371,969	8,902
Non-working	260,386	7,348
<b>All farm workers<sup>2</sup></b>	<b>644,377</b>	<b>14,627</b>
Hired workers	272,408	10,895

<sup>1</sup> All household youth and hired youth combined.  
<sup>2</sup> All household workers and hired workers combined.

**Table 3-57. Midwest regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>569,943</b>	<b>12,012</b>	<b>334,820</b>	<b>7,748</b>
<b>Farm household</b>	<b>331,202</b>	<b>7,249</b>	<b>301,153</b>	<b>7,002</b>
Working	219,318	5,977	152,651	5,054
Non-working	111,884	4,149	148,502	4,960
<b>All farm workers<sup>2</sup></b>	<b>458,059</b>	<b>11,316</b>	<b>186,318</b>	<b>6,048</b>
Hired workers	238,741	9,164	33,667	3,109

<sup>1</sup> All household youth and hired youth combined.  
<sup>2</sup> All household workers and hired workers combined.



**Table 3-58. Midwest regional estimates of farm household youth less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>223,112</b>	<b>6,797</b>
<b>10-15 years</b>	<b>233,137</b>	<b>6,003</b>
10-11 years	70,286	2,743
12-13 years	77,638	2,925
14-15 years	85,213	3,119
<b>16-19 years</b>	<b>176,106</b>	<b>4,816</b>
16-17 years	100,918	3,323
18-19 years	75,188	2,895

**Table 3-59. Midwest regional estimates of farm household youth less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>117,440</b>	<b>4,263</b>	<b>105,672</b>	<b>4,124</b>
<b>10-15 years</b>	<b>121,016</b>	<b>4,077</b>	<b>112,121</b>	<b>3,833</b>
10-11 years	35,534	1,940	34,752	1,935
12-13 years	40,339	2,151	37,299	2,003
14-15 years	45,144	2,352	40,069	2,109
<b>16-19 years</b>	<b>92,745</b>	<b>3,325</b>	<b>83,361</b>	<b>3,225</b>
16-17 years	53,636	2,399	47,282	2,308
18-19 years	39,110	2,070	36,078	2,020

**Table 3-60. Midwest regional estimates of farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>341,853</b>	<b>9,091</b>
Cash grains	285,935	8,441
Tobacco	3,676	1,002
Vegetables	9,691	1,667
Fruits, nuts	4,790	1,244
Nursery	4,678	1,317
Other crops	33,082	3,052
<b>Livestock</b>	<b>286,604</b>	<b>8,948</b>
Beef cattle	134,224	6,029
Dairy	95,683	5,829
Hogs	35,979	3,337
Sheep, goats	5,235	1,245
Equine	6,795	1,320
Poultry, eggs	5,347	1,518
Other livestock	3,342	970
<b>Unknown</b>	<b>3,899</b>	<b>---</b>

**Table 3-61. Midwest regional estimates of working farm household youth less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>63,262</b>	<b>3,239</b>
<b>10-15 years</b>	<b>172,572</b>	<b>5,314</b>
10-11 years	44,596	2,251
12-13 years	59,126	2,588
14-15 years	68,850	2,851
<b>16-19 years</b>	<b>136,135</b>	<b>4,267</b>
16-17 years	79,692	3,011
18-19 years	56,444	2,537

**Table 3-62. Midwest regional estimates of working farm household youth less than 20 years of age by age group: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;16 years</b>	<b>136,487</b>	<b>4,745</b>	<b>99,347</b>	<b>3,899</b>
<14 years <sup>1</sup>	96,134	3,898	70,850	3,252
14-15 years	40,353	2,246	28,497	1,788
<b>16-19 years</b>	<b>82,831</b>	<b>3,182</b>	<b>53,304</b>	<b>2,637</b>
16-17 years	48,290	2,300	31,402	1,930
18-19 years	34,541	1,970	21,903	1,602

<sup>1</sup> One or more age groups below 14 years of age for family or hired workers were not reportable.

**Table 3-63. Midwest regional estimates of working farm household youth less than 20 years of age, by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>189,561</b>	<b>6,528</b>
Cash grains	159,607	6,042
Veg., fruits, nuts	8,494	1,496
Other crops	21,459	2,309
<b>Livestock</b>	<b>180,284</b>	<b>6,818</b>
Beef cattle	80,921	4,472
Dairy	65,944	4,571
Hogs	22,913	2,451
Sheep, goats	2,749	841
Other livestock	7,712	1,379
<b>Unknown</b>	<b>2,124</b>	<b>---</b>

**Table 3-64. Midwest regional estimates of hired farm workers less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>4,586</b>	<b>1,005</b>
<b>10-15 years</b>	<b>88,837</b>	<b>5,292</b>
10-11 years	8,255	1,121
12-13 years	20,440	1,981
14-15 years	60,142	3,864
<b>16-19 years</b>	<b>178,985</b>	<b>7,718</b>
16-17 years	112,553	5,541
18-19 years	66,431	3,670

**Table 3-65. Midwest regional estimates of hired farm workers less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;16 years</b>	<b>77,959</b>	<b>4,593</b>	<b>15,464</b>	<b>1,928</b>
<14 years <sup>1</sup>	25,110	2,195	8,171	1,333
14-15 years	52,849	3,529	7,293	1,190
<b>16-19 years</b>	<b>160,782</b>	<b>6,755</b>	<b>18,203</b>	<b>2,073</b>
16-17 years	100,965	4,935	11,588	1,531
18-19 years	59,817	3,327	6,615	972

<sup>1</sup> One or more age groups below 14 years of age for family or hired workers were not reportable.

**Table 3-66. Midwest regional estimates of hired farm workers less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>147,879</b>	<b>8,629</b>
Cash grains	112,033	6,929
Veg., fruits, nuts	16,662	4,011
Other crops	19,184	3,408
<b>Livestock</b>	<b>122,447</b>	<b>7,001</b>
Beef cattle	56,345	4,398
Dairy	42,204	4,390
Hogs	12,168	2,054
Sheep, goats	2,521	767
Other livestock	9,208	2,652
<b>Unknown</b>	<b>2,083</b>	<b>---</b>

**Table 3-67. Midwest regional estimates of all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>67,848</b>	<b>3,475</b>
<b>10-15 years</b>	<b>261,409</b>	<b>7,647</b>
10-11 years	52,851	2,516
12-13 years	79,566	3,334
14-15 years	128,992	4,862
<b>16-19 years</b>	<b>315,120</b>	<b>9,155</b>
16-17 years	192,245	6,508
18-19 years	122,875	4,648

<sup>1</sup> All household workers and hired workers combined.

**Table 3-68. Midwest regional estimates of all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>40,103</b>	<b>2,445</b>	<b>27,745</b>	<b>2,030</b>
<b>10-15 years</b>	<b>174,343</b>	<b>5,997</b>	<b>87,066</b>	<b>3,599</b>
10-11 years	32,639	1,954	20,212	1,515
12-13 years	48,503	2,587	31,064	1,998
14-15 years	93,202	4,254	35,790	2,143
<b>16-19 years</b>	<b>243,613</b>	<b>7,645</b>	<b>71,507</b>	<b>3,489</b>
16-17 years	149,255	5,604	42,990	2,505
18-19 years	94,358	3,919	28,518	1,972

<sup>1</sup> All household workers and hired workers combined.

**Table 3-69. Midwest regional estimates of all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>337,440</b>	<b>11,500</b>
Cash grains	271,640	9,860
Vegetables	14,799	3,238
Fruits, nuts	10,358	3,225
Nursery	9,152	2,824
Other crops	31,490	3,425
<b>Livestock</b>	<b>302,731</b>	<b>10,562</b>
Beef cattle	137,266	6,628
Dairy	108,148	7,070
Hogs	35,081	3,685
Sheep, goats	5,315	1,312
Equine	7,631	2,094
Other livestock	9,290	2,591
<b>Unknown</b>	<b>4,207</b>	<b>---</b>

<sup>1</sup>

All household workers and hired workers combined.



**Table 3-70. Midwest regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to farm, type of farm and sex: 1998.**

Relationship to Farm	Farm Type	Males		Females	
		Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>Household</b>	<b>Crops</b>	<b>182,250</b>	<b>5,727</b>	<b>159,603</b>	<b>5,292</b>
	<b>Livestock</b>	<b>146,940</b>	<b>5,266</b>	<b>139,664</b>	<b>5,241</b>
	<b>Unknown</b>	<b>2,011</b>	<b>---</b>	<b>1,888</b>	<b>---</b>
Working	Crops	116,477	4,534	73,084	3,500
	Livestock	101,611	4,315	78,673	3,851
	Unknown	1,230	---	894	---
Non-working	Crops	65,773	3,257	86,519	3,880
	Livestock	45,329	2,736	60,991	3,318
	Unknown	781	---	994	---
<b>All farm workers<sup>2</sup></b>	<b>Crops</b>	<b>245,675</b>	<b>8,877</b>	<b>91,765</b>	<b>4,422</b>
	<b>Livestock</b>	<b>209,234</b>	<b>8,011</b>	<b>93,497</b>	<b>4,413</b>
	<b>Unknown</b>	<b>---</b>	<b>---</b>	<b>1,056</b>	<b>---</b>
Hired workers	Crops	129,198	7,097	18,681	2,445
	Livestock	107,623	6,103	14,824	1,928
	Unknown	1,921	---	162	---

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-71. Midwest regional estimates of farm injury rates per 100 youth less than 20 years of age: 1998.**

Relationship to Farm	Injuries	Youth	Rate/100 youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>12,040</b>	<b>904,763</b>	<b>1.33</b>	<b>0.17</b>
<b>Farm household</b>	<b>11,158</b>	<b>632,355</b>	<b>1.76</b>	<b>0.23</b>
Working	5,225	371,969	1.40	0.24
Non-working	5,933	632,355	0.94	0.15
<b>All farm workers<sup>2</sup></b>	<b>6,107</b>	<b>644,377</b>	<b>0.95</b>	<b>0.15</b>

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-72. Midwest regional estimates of farm injury rates for farm household youth less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/100 Youth	Standard Error
<10 years	4,289	223,112	1.92	0.34
10-15 years	4,403	233,137	1.89	0.32
16-19 years	2,466	176,106	1.40	0.34

**Table 3-73. Midwest regional estimates of injury rates for all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/100 Youth	Standard Error
<10 years	1,211	67,848	1.78	0.54
10-15 years	2,225	261,409	0.85	0.20
16-19 years	2,671	315,120	0.85	0.19

<sup>1</sup> All household workers and hired workers combined.

**Table 3-74. Midwest regional estimates of farm injury rates per 100 youth less than 20 years of age by type of farm and relationship to farm: 1998.**

Type of Farm and Relationship to Farm	Injuries	Youth	Rate/ 100 youth	Standard Error
<b>Crops</b>				
Farm household	4,494	341,853	1.31	0.21
All farm workers <sup>1</sup>	2,741	337,440	0.81	0.18
<b>Livestock</b>				
Farm household	5,590	286,604	1.95	0.32
All farm workers <sup>1</sup>	3,179	302,731	1.05	0.23

<sup>1</sup> All household workers and hired workers combined.

**Table 3-75. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Youth Injuries	Standard Error
<b>All youth<sup>1</sup></b>	<b>8,810</b>	<b>1,192</b>
Working	3,623	803
Non-working	5,187	797
Visitors	1,253	433
<b>All farm youth<sup>2</sup></b>	<b>7,557</b>	<b>1,097</b>
<b>Farm household</b>	<b>7,058</b>	<b>1,040</b>
Working	2,643	676
Non-working	4,415	733
<b>All farm workers<sup>3</sup></b>	<b>3,142</b>	<b>508</b>
Hired workers	499	249

- <sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.  
<sup>2</sup> All household youth and hired youth combined.  
<sup>3</sup> All household workers and hired workers combined.

**Table 3-76. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Youth Injuries	Standard Error	Youth Injuries	Standard Error
<b>All youth<sup>1</sup></b>	<b>6,815</b>	<b>1,082</b>	<b>1,995</b>	<b>483</b>
Working	3,409	787	--- <sup>2</sup>	---
Non-working	3,406	654	1,781	459
<b>Farm household</b>	<b>5,115</b>	<b>938</b>	<b>1,943</b>	<b>470</b>

- <sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.  
<sup>2</sup> Cells are too small to report detailed groups.

**Table 3-77. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	2,645	563
10-15 years	3,629	750
16-19 years	2,536	620

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-78. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>3,350</b>	<b>690</b>
Cash grains	1,241	464
Tobacco	1,117	372
All other crops	992	351
<b>Livestock</b>	<b>4,715</b>	<b>910</b>
Beef cattle	2,978	632
<b>Unknown</b>	<b>745</b>	<b>---</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-79. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Scrape,abrasion	993	351
Sprain,strain,torn ligament	993	351
Broken bone,fracture	1,613	447
Cut,laceration	1,861	480
Other injuries	2,853	667
Unknown	496	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-80. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by body part injured: 1998.**

Body Part Injured	Youth Injuries	Standard Error
Head,skull	1,737	464
Shoulder,chest,back	993	351
Hand,wrist,fingers	2,358	568
Leg	993	351
Other body parts	2,233	554
Unknown	496	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-81. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by source of injury: 1998.**

Source of Injury	Youth Injuries	Standard Error
Animals, animal products	1,117	372
Floors, walkways, ground surfaces	1,117	372
Other structural elements	993	351
Other sources	4,590	884
Unknown	993	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-82. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Struck against object	993	351
Struck by object	1,365	480
Non-highway accident, except rail, air, water	1,241	430
Assaults by animals	993	351
Other events	3,101	644
Unknown	1,117	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-83. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of injury and body part injured: 1998.**

Type of Injury	Body Part	Youth Injuries	Standard Error
Cut, lacerations	Head, skull	869	328
Other injuries	Other body parts	7,445	1,063
Unknown	Unknown	496	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-84. South regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by source of injury and injury event: 1998.**

Source of Injury	Injury Event	Youth Injuries	Standard Error
Animals, animal products	Assaults by animals	993	351
Other sources	Other events	6,823	1,071
Unknown	Unknown	993	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.



**Table 3-85. South regional estimates of farm injuries to all farm youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	2,549	555
10-15 years	3,215	740
16-19 years	1,793	512

<sup>1</sup> All household youth and hired youth combined.

**Table 3-86. South regional estimates of farm injuries to farm household youth less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	2,549	555
10-15 years	3,239	746
16-19 years	1,270	401

**Table 3-87. South regional estimates of farm injuries to farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>2,606</b>	<b>568</b>
Tobacco	1,117	372
All other crops	1,489	429
<b>Livestock</b>	<b>3,970</b>	<b>840</b>
Beef cattle	2,482	581
Dairy	1,117	568
<b>Unknown</b>	<b>248</b>	<b>---</b>

**Table 3-88. South regional estimates of farm injuries to farm household youth less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Broken bone, fracture	1,241	392
Cut, laceration	1,613	447
Other injuries	3,846	773
Unknown	124	---

**Table 3-89. South regional estimates of farm injuries to farm household youth less than 20 years of age by body part injured: 1998.**

Body Part Injured	Youth Injuries	Standard Error
Head, skull	1,613	447
Hand, wrist, fingers	1,613	447
Other body parts	3,474	764
Unknown	124	---

**Table 3-90. South regional estimates of farm injuries to farm household youth less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Contact with objects and equipment	2,233	554
Non-highway accident, except rail, air, water	1,117	411
Other events	2,730	581
Unknown	744	---

**Table 3-91. South regional estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
< 16 years <sup>2</sup>	1,634	548
16-19 years	1,508	470

<sup>1</sup> All household workers and hired workers combined.  
<sup>2</sup> One or more age groups below 16 years of age for all farm workers were not reportable.

**Table 3-92. South regional estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>1,117</b>	<b>456</b>
<b>Livestock</b>	<b>2,109</b>	<b>644</b>
Beef cattle	1,117	372
<b>Unknown</b>	<b>124</b>	<b>---</b>

<sup>1</sup> All household workers and hired workers combined.

**Table 3-93. South regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>557,501</b>	<b>14,562</b>
<b>Farm household</b>	<b>352,397</b>	<b>8,800</b>
Working	180,406	6,231
Non-working	171,991	5,958
<b>All farm workers<sup>2</sup></b>	<b>385,510</b>	<b>13,020</b>
Hired workers	205,104	10,818

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-94. South regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>367,716</b>	<b>11,591</b>	<b>189,785</b>	<b>6,136</b>
<b>Farm household</b>	<b>186,052</b>	<b>5,662</b>	<b>166,345</b>	<b>5,359</b>
Working	113,621	4,396	66,785	3,424
Non-working	72,431	3,561	99,560	4,077
<b>All farm workers<sup>2</sup></b>	<b>295,285</b>	<b>10,954</b>	<b>90,225</b>	<b>4,584</b>
Hired workers	181,664	9,629	23,440	2,962

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-95. South regional estimates of farm household youth less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>114,860</b>	<b>4,827</b>
<b>10-15 years</b>	<b>133,142</b>	<b>4,799</b>
10-11 years	35,303	2,138
12-13 years	45,515	2,400
14-15 years	52,324	2,562
<b>16-19 years</b>	<b>104,395</b>	<b>3,861</b>
16-17 years	55,854	2,658
18-19 years	48,541	2,464

**Table 3-96. South regional estimates of farm household youth less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>60,584</b>	<b>3,185</b>	<b>54,276</b>	<b>2,976</b>
<b>10-15 years</b>	<b>68,552</b>	<b>4,103</b>	<b>64,590</b>	<b>3,063</b>
10-11 years	16,822	1,494	18,481	1,531
12-13 years	23,146	1,734	22,369	1,663
14-15 years	28,585	1,880	23,739	1,723
<b>16-19 years</b>	<b>56,916</b>	<b>2,765</b>	<b>47,479</b>	<b>2,492</b>
16-17 years	29,596	1,910	26,258	1,807
18-19 years	27,320	1,861	21,221	1,615

**Table 3-97. South regional estimates of farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>144,741</b>	<b>6,111</b>
Cash grains	38,959	3,333
Tobacco	42,615	3,361
Cotton	18,534	2,289
Vegetables	5,169	1,290
Fruits, nuts	3,782	984
Nursery	9,078	1,608
Other crops	26,603	2,657
<b>Livestock</b>	<b>203,873</b>	<b>7,041</b>
Beef cattle	145,876	5,849
Dairy	17,021	2,525
Hogs	5,674	1,408
Sheep, goats	4,035	1,025
Equine	10,717	1,514
Poultry, eggs	15,508	2,215
Other livestock	5,043	1,345
<b>Unknown</b>	<b>3,782</b>	<b>---</b>

**Table 3-98. South regional estimates of working farm household youth less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>23,658</b>	<b>2,049</b>
<b>10-15 years</b>	<b>84,636</b>	<b>3,875</b>
10-11 years	19,230	1,600
12-13 years	29,351	1,957
14-15 years	36,056	2,176
<b>16-19 years</b>	<b>72,112</b>	<b>3,280</b>
16-17 years	38,333	2,234
18-19 years	33,779	2,088

**Table 3-99. South regional estimates of working farm household youth less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;16 years</b>	<b>66,047</b>	<b>3,329</b>	<b>42,247</b>	<b>2,663</b>
<14 years <sup>1</sup>	42,387	2,648	29,851	2,228
14-15 years	23,660	1,727	12,396	1,261
<b>16-19 years</b>	<b>47,574</b>	<b>2,570</b>	<b>24,538</b>	<b>1,809</b>
16-17 years	24,546	1,753	13,787	1,320
18-19 years	23,028	1,737	10,751	1,165

<sup>1</sup> One or more age groups below 14 years of age for family or hired workers were not reportable.



**Table 3-100. South regional estimates of working farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>67,557</b>	<b>3,937</b>
Cash grains	17,838	2,051
Tobacco	25,049	2,424
Cotton	7,338	1,299
Veg., fruits, nuts	3,922	1,019
Nursery	4,301	1,032
Other Crops	9,109	1,467
<b>Livestock</b>	<b>111,457</b>	<b>5,050</b>
Beef cattle	76,540	4,068
Dairy	11,260	1,909
Equine	4,933	987
Poultry, eggs	9,741	1,725
Other livestock	8,982	1,534
<b>Unknown</b>	<b>1,392</b>	<b>---</b>

**Table 3-101. South regional estimates of hired farm workers less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>4,229</b>	<b>1,104</b>
<b>10-15 years</b>	<b>46,377</b>	<b>3,713</b>
10-11 years	4,088	792
12-13 years	12,828	1,373
14-15 years	29,462	2,650
<b>16-19 years</b>	<b>154,498</b>	<b>9,236</b>
16-17 years	77,108	5,500
18-19 years	77,390	5,610

**Table 3-102. South regional estimates of hired farm workers less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;16 years</b>	<b>40,463</b>	<b>3,348</b>	<b>10,143</b>	<b>1,514</b>
<14 years <sup>1</sup>	15,735	1,846	5,409	1,075
14-15 years	24,728	2,284	4,734	925
<b>16-19 years</b>	<b>141,201</b>	<b>8,416</b>	<b>13,297</b>	<b>2,250</b>
16-17 years	70,671	5,046	6,437	1,490
18-19 years	70,530	5,211	6,860	1,294

<sup>1</sup>

One or more age groups below 14 years of age for family or hired workers were not reportable.

**Table 3-103. South regional estimates of hired farm workers less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>105,096</b>	<b>8,638</b>
Cash grains	13,401	2,488
Tobacco	48,763	5,424
Cotton	7,817	1,667
Veg., fruits, nuts	17,919	5,245
Nursery	8,189	2,203
Other crops	9,306	2,261
<b>Livestock</b>	<b>99,140</b>	<b>6,749</b>
Beef cattle	70,602	5,294
Dairy	7,321	1,591
Equine	5,335	1,306
Poultry, eggs	5,460	1,831
Other livestock	10,423	3,266
<b>Unknown</b>	<b>869</b>	<b>---</b>

**Table 3-104. South regional estimates of all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>27,887</b>	<b>2,334</b>
<b>10-15 years</b>	<b>131,013</b>	<b>5,529</b>
10-11 years	23,318	1,796
12-13 years	42,179	2,409
14-15 years	65,518	3,559
<b>16-19 years</b>	<b>226,610</b>	<b>10,012</b>
16-17 years	115,441	6,095
18-19 years	111,169	6,091

<sup>1</sup> All household workers and hired workers combined.

**Table 3-105. South regional estimates of all farm workers<sup>1</sup> less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>18,021</b>	<b>1,810</b>	<b>9,866</b>	<b>1,249</b>
<b>10-15 years</b>	<b>88,489</b>	<b>4,314</b>	<b>42,524</b>	<b>2,656</b>
10-11 years	13,087	1,354	10,231	1,185
12-13 years	27,015	1,923	15,164	1,422
14-15 years	48,388	2,939	17,130	1,593
<b>16-19 years</b>	<b>188,775</b>	<b>8,925</b>	<b>37,835</b>	<b>2,891</b>
16-17 years	95,217	5,464	20,224	1,991
18-19 years	93,558	5,530	17,611	1,754

<sup>1</sup> All household workers and hired workers combined.

**Table 3-106. South regional estimates of all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>172,653</b>	<b>10,058</b>
Cash grains	31,239	3,454
Tobacco	73,812	6,561
Cotton	15,155	2,285
Veg., fruits, nuts	21,541	5,460
Nursery	12,490	2,530
Other crops	18,415	2,817
<b>Livestock</b>	<b>210,597</b>	<b>8,916</b>
Beef cattle	147,142	7,031
Dairy	18,581	2,776
Hogs	7,260	2,387
Sheep, goats	5,142	1,283
Equine	10,268	1,837
Poultry, eggs	15,201	2,699
Other livestock	7,000	2,805
Unknown	2,261	---

<sup>1</sup> All household workers and hired workers combined.

**Table 3-107. South regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to farm, type of farm and sex: 1998.**

Relationship to Farm	Farm Type	Males		Females	
		Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>Household</b>	<b>Crops</b>	<b>77,658</b>	<b>3,836</b>	<b>67,083</b>	<b>5,292</b>
	<b>Livestock</b>	<b>106,622</b>	<b>4,473</b>	<b>97,251</b>	<b>5,241</b>
	<b>Unknown</b>	<b>1,771</b>	<b>---</b>	<b>2,011</b>	<b>---</b>
Working	Crops	43,526	2,799	24,031	3,500
	Livestock	69,210	3,511	42,247	3,851
	Unknown	886	---	506	---
Non-working	Crops	34,132	2,524	43,052	3,880
	Livestock	37,412	2,580	55,004	3,318
	Unknown	885	---	1,505	---
<b>All farm workers<sup>2</sup></b>	<b>Crops</b>	<b>132,238</b>	<b>8,243</b>	<b>40,415</b>	<b>3,466</b>
	<b>Livestock</b>	<b>131,476</b>	<b>6,228</b>	<b>49,121</b>	<b>3,090</b>
	<b>Unknown</b>	<b>1,573</b>	<b>---</b>	<b>688</b>	<b>---</b>
Hired workers	Crops	88,712	7,288	16,384	2,704
	Livestock	92,266	6,480	6,874	1,058
	Unknown	687	---	182	---

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-108. South regional estimates of farm injury rates per 100 youth less than 20 years of age: 1998.**

Relationship to Farm	Injuries	Youth	Rate/100 youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>7,557</b>	<b>557,501</b>	<b>1.36</b>	<b>0.20</b>
<b>Farm household</b>	<b>7,058</b>	<b>352,397</b>	<b>2.00</b>	<b>0.30</b>
Working	2,643	180,406	1.47	0.38
Non-working	4,415	352,397	1.25	0.17
<b>All farm workers<sup>2</sup></b>	<b>3,142</b>	<b>385,510</b>	<b>0.82</b>	<b>0.13</b>

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-109. South regional estimates of farm injury rates for farm household youth less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/100 Youth	Standard Error
<10 years	2,549	114,860	2.22	0.49
10-15 years	3,239	133,142	2.43	0.57
16-19 years	1,270	104,395	1.22	0.39

**Table 3-110. South regional estimates of farm injury rates for all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/100 youth	Standard Error
<10 years	249	27,887	0.89	0.64
10-15 years	1,385	131,013	1.06	0.40
16-19 years	1,508	226,610	0.67	0.21

<sup>1</sup> All household workers and hired workers combined.

**Table 3-111. South regional estimates of farm injury rates per 100 youth less than 20 years of age by type of farm and relationship to farm: 1998.**

Farm Type and Relationship to Farm	Injuries	Youth	Rate/ 100 youth	Standard Error
<b>Crops</b>				
Farm household	2,606	144,741	1.80	0.40
All farm workers <sup>1</sup>	1,117	172,653	0.65	0.27
<b>Livestock</b>				
Farm household	3,970	203,873	1.95	0.42
All farm workers <sup>1</sup>	2,109	210,597	1.00	0.31

<sup>1</sup>

All household workers and hired workers combined.



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**Table 3-112. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Youth Injuries	Standard Error
<b>All youth<sup>1</sup></b>	<b>5,097</b>	<b>456</b>
Working	2,253	292
Non-working	2,844	340
Visitors	923	184
<b>All farm youth<sup>2</sup></b>	<b>4,174</b>	<b>408</b>
<b>Farm household</b>	<b>3,769</b>	<b>390</b>
Working	1,636	251
Non-working	2,133	290
<b>All farm workers<sup>3</sup></b>	<b>2,041</b>	<b>253</b>
Hired workers	405	122

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

<sup>2</sup> All household youth and hired youth combined.

<sup>3</sup> All household workers and hired workers combined.

**Table 3-113. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Youth Injuries	Standard Error	Youth Injuries	Standard Error
<b>All Youth<sup>1</sup></b>	<b>3,842</b>	<b>391</b>	<b>1,255</b>	<b>214</b>
Working	1,791	262	462	128
Non-working	2,051	286	843	183
<b>Farm household</b>	<b>2,948</b>	<b>348</b>	<b>821</b>	<b>170</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-114. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	1,563	245
10-15 years	2,256	296
16-19 years	1,278	202

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-115. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>2,090</b>	<b>299</b>
Cash grains	770	183
Fruits, nuts	550	168
All other crops	770	168
<b>Livestock</b>	<b>2,824</b>	<b>336</b>
Beef cattle	1,907	278
Dairy	403	122
All other livestock	367	127
<b>Unknown</b>	<b>183</b>	<b>---</b>

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-116. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Scrape,abrasion	513	137
Bruise,contusion	477	151
Sprain,strain,torn ligament	330	110
Broken bone,fracture	1,210	210
Cut,laceration	1,247	213
Puncture,stab,jab	220	90
Multiple injuries	330	122
Other injuries	587	147
Unknown	183	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-117. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by body part injured: 1998.**

Body Part Injured	Youth Injuries	Standard Error
Head,skull	623	160
Face	293	104
Shoulder,chest,back	550	142
Arm	697	160
Hand,wrist,fingers	990	190
Leg	697	168
Foot,ankle,toes	513	147
Multiple body parts	330	122
Unknown	183	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-118. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by source of injury: 1998.**

Source of Injury	Youth Injuries	Standard Error
Agricultural, garden machinery	183	82
Building materials-solid elements	183	82
Animals, animal products	330	110
Floors, walkways, ground surfaces	1,320	226
Highway vehicle-motorized	403	132
Offroad vehicle-nonindustrial	550	160
Other sources	1,724	251
Unknown	403	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-119. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Contact with object	367	116
Struck against object	367	116
Struck by object	513	137
Caught in, compressed by objects or equipment	293	104
Fall to lower level	1,063	204
Fall on same level	293	104
Non-highway accident, except rail, air, water	1,210	229
Other events	661	167
Unknown	330	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-120. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by type of injury and body part injured: 1998.**

Type of Injury	Body Part	Youth Injuries	Standard Error
Scrape,abrasion	Head,skull	257	97
Broken bone,fracture	Arm	513	137
Cut,laceration	Hand,wrist,fingers	477	132
Other injuries	Other body parts	3,666	615
Unknown	Unknown	184	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-121. West regional estimates of farm injuries to all youth<sup>1</sup> less than 20 years of age by source of injury and injury event: 1998.**

Source of Injury	Injury Event	Youth Injuries	Standard Error
Floors,walkways,ground surfaces	Fall to lower level	917	190
Highway vehicle, motorized	Non-highway accident, except rail, air, water	330	122
Offroad vehicle, nonindustrial	Non-highway accident, except rail, air, water	550	160
Other sources	Other events	2,896	324
Unknown	Unknown	404	---

<sup>1</sup> All household youth, hired youth, and youth visiting the farm combined.

**Table 3-122. West regional estimates of farm injuries to all farm youth<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	1,255	223
10-15 years	1,827	267
16-19 years	1,092	202

<sup>1</sup> All household youth and hired youth combined.

**Table 3-123. West regional estimates of farm injuries to farm household youth less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	1,255	223
10-15 years	1,767	265
16-19 years	747	167

**Table 3-124. West regional estimates of farm injuries to farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>1,723</b>	<b>278</b>
Cash grains	587	161
Fruits, nuts	513	164
All other crops	623	156
<b>Livestock</b>	<b>2,017</b>	<b>287</b>
Beef cattle	1,283	229
Dairy	367	122
All other livestock	367	122
<b>Unknown</b>	<b>147</b>	<b>---</b>



**Table 3-125. West regional estimates of farm injuries to farm household youth less than 20 years of age by type of injury: 1998.**

Type of Injury	Youth Injuries	Standard Error
Scrape,abrasion	403	127
Bruise,contusion	403	132
Sprain,strain,torn ligament	220	90
Broken bone,fracture	880	179
Cut,laceration	953	187
Other injuries	844	187
Unknown	74	---

**Table 3-126. West regional estimates of farm injuries to farm household youth less than 20 years of age by body part injured: 1998.**

Body Part Injured	Youth Injuries	Standard Error
Head,skull	440	133
Shoulder,chest,back	477	132
Arm	440	127
Hand,wrist,fingers	660	155
Leg	587	155
Foot,ankle,toes	440	137
Other body parts	659	164
Unknown	74	---

**Table 3-127. West regional estimates of farm injuries to farm household youth less than 20 years of age by injury event: 1998.**

Injury Event	Youth Injuries	Standard Error
Contact with object, unspecified	257	97
Struck against object	183	82
Struck by object	477	132
Caught in, compressed by equipment or object	183	82
Fall to lower level	733	172
Fall to same level	293	104
Non-highway accident, except rail, air, water	990	197
Other events	404	122
Unknown	257	---

**Table 3-128. West regional estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Youth Injuries	Standard Error
<10 years	258	97
10-15 years	893	190
16-19 years	890	181

<sup>1</sup> All household workers and hired workers combined.

**Table 3-129. West regional estimates of farm injuries to all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Youth Injuries	Standard Error
<b>Crops</b>	<b>770</b>	<b>181</b>
Cash grains	293	111
All other crops	477	142
<b>Livestock</b>	<b>1,173</b>	<b>207</b>
Beef cattle	733	164
<b>Unknown</b>	<b>110</b>	<b>---</b>

<sup>1</sup> All household workers and hired workers combined.

**Table 3-130. West regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm: 1998.**

Relationship to Farm	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>302,977</b>	<b>6,474</b>
<b>Farm household</b>	<b>184,394</b>	<b>3,757</b>
Working	113,430	2,906
Non-working	70,964	2,249
<b>All farm workers<sup>2</sup></b>	<b>232,013</b>	<b>6,013</b>
Hired workers	118,583	5,117

<sup>1</sup>

All household youth and hired youth combined.

<sup>2</sup>

All household workers and hired workers combined.

**Table 3-131. West regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to the farm and sex: 1998.**

Relationship to Farm	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>All farm youth<sup>1</sup></b>	<b>198,590</b>	<b>4,939</b>	<b>104,387</b>	<b>2,686</b>
<b>Farm household</b>	<b>99,086</b>	<b>2,387</b>	<b>85,308</b>	<b>2,199</b>
Working	67,079	1,956	46,351	1,615
Non-working	32,007	1,304	38,957	1,517
<b>All farm workers<sup>2</sup></b>	<b>166,583</b>	<b>4,743</b>	<b>65,430</b>	<b>2,243</b>
Hired workers	99,504	4,233	19,079	1,519

<sup>1</sup>

All household youth and hired youth combined.

<sup>2</sup>

All household workers and hired workers combined.

**Table 3-132. West regional estimates of farm household youth and less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>60,321</b>	<b>2,021</b>
<b>10-15 years</b>	<b>70,494</b>	<b>1,934</b>
10-11 years	20,641	884
12-13 years	23,101	927
14-15 years	26,752	998
<b>16-19 years</b>	<b>53,578</b>	<b>1,560</b>
16-17 years	31,335	1,077
18-19 years	22,244	921

**Table 3-133. West regional estimates of farm household youth less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>31,733</b>	<b>1,298</b>	<b>28,588</b>	<b>1,221</b>
<b>10-15 years</b>	<b>37,975</b>	<b>1,315</b>	<b>32,519</b>	<b>1,194</b>
10-11 years	11,363	652	9,278	581
12-13 years	12,409	675	10,692	639
14-15 years	14,203	732	12,549	683
<b>16-19 years</b>	<b>29,378</b>	<b>1,098</b>	<b>24,200</b>	<b>990</b>
16-17 years	17,044	794	14,291	731
18-19 years	12,334	689	9,910	601

**Table 3-134. West regional estimates of farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>100,077</b>	<b>2,954</b>
Cash grains	37,073	1,905
Cotton	1,528	370
Vegetables	7,862	938
Fruits, nuts	24,740	1,497
Nursery	3,577	526
Other crops	25,299	1,609
<b>Livestock</b>	<b>82,678</b>	<b>2,788</b>
Beef cattle	57,938	2,345
Dairy	11,289	1,170
Hogs	1,565	486
Sheep, goats	4,732	700
Equine	4,248	584
Other livestock	2,907	548
<b>Unknown</b>	<b>1,639</b>	<b>---</b>

**Table 3-135. West regional estimates of working farm household youth less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>19,703</b>	<b>1,069</b>
<b>10-15 years</b>	<b>50,621</b>	<b>1,654</b>
10-11 years	13,123	718
12-13 years	16,113	796
14-15 years	21,385	903
<b>16-19 years</b>	<b>43,106</b>	<b>1,421</b>
16-17 years	25,610	980
18-19 years	17,497	830

**Table 3-136. West regional estimates of working farm household youth less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;16 years</b>	<b>41,615</b>	<b>1,506</b>	<b>28,709</b>	<b>1,220</b>
<14 years <sup>1</sup>	29,089	1,251	19,850	996
14-15 years	12,526	691	8,859	582
<b>16-19 years</b>	<b>25,463</b>	<b>1,035</b>	<b>17,643</b>	<b>863</b>
16-17 years	14,956	751	10,654	635
18-19 years	10,507	636	6,990	517

<sup>1</sup> One or more age groups below 14 years of age for family or hired workers were not reportable.

**Table 3-137. West regional estimates of working farm household youth less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>54,995</b>	<b>2,099</b>
Cash grains	21,609	1,343
Vegetables	4,374	703
Fruits, nuts	12,151	982
Other crops	16,862	1,197
<b>Livestock</b>	<b>57,500</b>	<b>2,216</b>
Beef cattle	40,527	1,865
Dairy	7,103	870
Sheep, goats	3,701	591
Equine	2,991	451
Other livestock	3,178	589
<b>Unknown</b>	<b>934</b>	<b>---</b>



**Table 3-138. West regional estimates of hired farm workers less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>1,544</b>	<b>284</b>
<b>10-15 years</b>	<b>28,425</b>	<b>1,974</b>
10-11 years	3,131	437
12-13 years	7,597	790
14-15 years	17,698	1,331
<b>16-19 years</b>	<b>88,614</b>	<b>3,929</b>
16-17 years	45,455	2,432
18-19 years	43,159	2,266

**Table 3-139. West regional estimates of hired farm workers less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;16 years</b>	<b>22,978</b>	<b>1,588</b>	<b>6,991</b>	<b>810</b>
<14 years <sup>1</sup>	8,924	843	3,347	497
14-15 years	14,054	1,081	3,644	508
<b>16-19 years</b>	<b>76,525</b>	<b>3,411</b>	<b>12,088</b>	<b>1,052</b>
16-17 years	38,993	2,135	6,462	675
18-19 years	37,533	2,014	5,626	611

<sup>1</sup> One or more age groups below 14 years of age for family or hired workers were not reportable.

**Table 3-140. West regional estimates of hired farm workers less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>69,412</b>	<b>4,511</b>
Cash grains	17,124	1,742
Vegetables	6,747	1,702
Fruits, nuts	21,377	2,771
Other crops	24,164	2,685
<b>Livestock</b>	<b>48,621</b>	<b>2,595</b>
Beef cattle	32,414	2,128
Dairy	7,480	1,092
Sheep, goats	2,970	614
Equine	2,897	573
Other livestock	2,860	693
<b>Unknown</b>	<b>550</b>	<b>---</b>

**Table 3-141. West regional estimates of all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>21,247</b>	<b>1,116</b>
<b>10-15 years</b>	<b>79,046</b>	<b>2,672</b>
10-11 years	16,254	840
12-13 years	23,710	1,144
14-15 years	39,083	1,654
<b>16-19 years</b>	<b>131,720</b>	<b>4,221</b>
16-17 years	71,065	2,655
18-19 years	60,656	2,437

<sup>1</sup> All household workers and hired workers combined.

**Table 3-142. West regional estimates of all farm workers<sup>1</sup> less than 20 years of age by age group and sex: 1998.**

Age Group	Males		Females	
	Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>&lt;10 years</b>	<b>12,600</b>	<b>785</b>	<b>8,647</b>	<b>626</b>
<b>10-15 years</b>	<b>51,993</b>	<b>1,960</b>	<b>27,053</b>	<b>1,250</b>
10-11 years	10,383	668	5,871	480
12-13 years	15,030	841	8,679	644
14-15 years	26,580	1,315	12,503	775
<b>16-19 years</b>	<b>101,988</b>	<b>3,594</b>	<b>29,731</b>	<b>1,371</b>
16-17 years	53,949	2,287	17,116	945
18-19 years	48,040	2,128	12,616	799

<sup>1</sup> All household workers and hired workers combined.

**Table 3-143. West regional estimates of all farm workers<sup>1</sup> less than 20 years of age by type of farm: 1998.**

Type of Farm	Estimated Youth	Standard Error
<b>Crops</b>	<b>124,407</b>	<b>5,195</b>
Cash grains	38,733	2,403
Vegetables	11,121	1,936
Fruits, nuts	33,528	3,036
Nursery	6,338	2,021
Other crops	34,687	2,381
<b>Livestock</b>	<b>106,121</b>	<b>3,593</b>
Beef cattle	72,941	2,985
Dairy	14,583	1,549
Hogs	1,711	490
Sheep, goats	6,671	925
Equine	5,888	761
Other livestock	4,327	840
<b>Unknown</b>	<b>1,484</b>	<b>---</b>

<sup>1</sup> All household workers and hired workers combined.

**Table 3-144. West regional estimates of all farm youth<sup>1</sup> less than 20 years of age by relationship to farm, type of farm and sex: 1998.**

Relationship to Farm	Farm Type	Males		Females	
		Estimated Youth	Standard Error	Estimated Youth	Standard Error
<b>Household</b>	<b>Crops</b>	<b>54,010</b>	<b>1,866</b>	<b>46,067</b>	<b>16,710</b>
	<b>Livestock</b>	<b>44,179</b>	<b>1,703</b>	<b>38,499</b>	<b>1,597</b>
	<b>Unknown</b>	<b>897</b>	<b>---</b>	<b>742</b>	<b>---</b>
Working	Crops	33,165	1,428	21,830	1,112
	Livestock	33,277	1,442	24,223	1,230
	Unknown	635	---	299	---
Non-Working	Crops	20,845	1,082	24,237	1,213
	Livestock	10,902	756	14,276	949
	Unknown	262	---	443	---
<b>All Farm Workers<sup>2</sup></b>	<b>Crops</b>	<b>90,697</b>	<b>4,055</b>	<b>33,710</b>	<b>1,810</b>
	<b>Livestock</b>	<b>74,861</b>	<b>2,825</b>	<b>31,260</b>	<b>1,429</b>
	<b>Unknown</b>	<b>973</b>	<b>---</b>	<b>461</b>	<b>---</b>
Hired workers	Crops	57,532	3,655	11,880	1,344
	Livestock	41,584	2,287	7,037	701
	Unknown	338	---	162	---

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-145. West regional estimates of farm injury rates per 100 youth less than 20 years of age: 1998.**

Relationship to Farm	Injuries	Youth	Rate/100 youth	Standard Error
<b>All Farm Youth<sup>1</sup></b>	<b>4,174</b>	<b>302,977</b>	<b>1.38</b>	<b>0.14</b>
<b>Farm Household</b>	<b>3,769</b>	<b>184,394</b>	<b>2.04</b>	<b>0.22</b>
Working	1,636	113,430	1.44	0.22
Non-working	2,133	184,394	1.16	0.16
<b>All Farm Workers<sup>2</sup></b>	<b>2,041</b>	<b>232,013</b>	<b>0.88</b>	<b>0.11</b>

<sup>1</sup> All household youth and hired youth combined.

<sup>2</sup> All household workers and hired workers combined.

**Table 3-146. West regional estimates of farm injury rates for farm household youth less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/100 Youth	Standard Error
<10 years	1,255	60,321	2.08	0.38
10-15 years	1,767	70,494	2.51	0.38
16-19 years	747	53,578	1.39	0.31

**Table 3-147. West regional estimates of farm injury rates for all farm workers<sup>1</sup> less than 20 years of age by age group: 1998.**

Age Group	Injuries	Youth	Rate/100 Youth	Standard Error
<10 years	258	21,247	1.21	0.46
10-15 years	893	79,046	1.13	0.24
16-19 years	890	131,720	0.68	0.14

<sup>1</sup> All household workers and hired workers combined.

**Table 3-148. West regional estimates of farm injury rates per 100 youth less than 20 years of age by type of farm and relationship to farm: 1998.**

Type of Farm and Relationship to Farm	Injuries	Youth	Rate/ 100 youth	Standard Error
<b>Crops</b>				
Farm household	1,723	100,077	1.72	0.28
All farm workers <sup>1</sup>	770	124,407	0.62	0.15
<b>Livestock</b>				
Farm household	2,017	82,678	2.44	0.36
All farm workers <sup>1</sup>	1,173	106,121	1.11	0.20

<sup>1</sup> All household workers and hired workers combined.

# Appendix A: Questionnaire





**1998 CHILDHOOD AGRICULTURAL  
INJURIES QUESTIONNAIRE  
National Agricultural Statistics Service**

INT1. Hello, my name is \_\_\_\_\_ and I am working with the National Agricultural Statistics Service for the Centers for Disease Control and Prevention. We are interested in learning more about injuries to children and adolescents. We are asking farm/ranch/orchard families for information about their Agricultural operation as well as about any accidents and injuries, including those from recreational activities that occurred on your farm in the past year. This will take about \_\_\_\_ minutes.

The information you provide will be held strictly confidential and your cooperation is voluntary. This information will be combined with others' to help identify common patterns of injury and the means of preventing such injuries to children and adolescents. Would you help us by answering these questions?

1.  YES [Continue on to INT 2]
2.  NO

I assure you that everything you tell us will be kept confidential. Your answers are very important to us because your answers will be used to represent other farm/ranch/orchard families who were not selected to be interviewed. Results of this project will be used to identify common patterns on injury and the means of preventing agricultural injuries to children and adolescents that could benefit all farm/ranch/orchard families. Would you consider helping us?

1.  YES [Continue on to INT 2]
2.  NO — I'm sorry to have bothered you. Thank you for your time.

INT2. Hello, may I please speak with the adult female of the household?

1.  YES
2.  NOT AVAILABLE - - When would be a good time to call back? \_\_\_\_\_
3.  NO FEMALE HEAD-OF-HOUSEHOLD - - Ask for adult male

**HOUSEHOLD SUMMARY**

1. First, I would like to know how many people live in your household, (*Including yourself, and Excluding temporary visitors*) . . . . .

Now, I would like to know a little about each of the (*repeat number*) people. Let's start with you. Could I have your name? . . . . .

2. **IWER: Record relationship as respondent.**  
 01  Self      03  Child/Step-Child      05  Sibling      07  Boarder  
 02  Spouse      04  Parent      06  Relative      08  Other (Specify: \_\_\_\_\_)

3. **IWER: Respondent's sex?** . . . . .  Male       Female

4. What was your age on your last birthday? . . . . .

5. Are you: (*Please check ✓ ONLY ONE*).  
 01  Married      03  Divorced      05  Married, but apart  
 02  Widowed      04  Separated      06  Single, never married

6. How many years of schooling have you completed? . . . . .

7. Do you have a: (*Please check ✓ ONLY ONE*).  
 01  High School Diploma      02  GED Certificate      03  Neither

8. Did you perform work on the farm at any time during 1998? . . . . .  Yes       No

**IWER: Repeat 1a through 1g for each additional person in the household and record the information in the appropriate space.**

**IF NO MORE IN THE HOUSEHOLD [SKIP TO Item 1 on page 3]**

1a. What is the name of the next person living in the household? . . .

1b. How is this person related to you? (*Please check ✓ ONLY ONE*).  
 01  Self      03  Child/Step-Child      05  Sibling      07  Boarder  
 02  Spouse      04  Parent      06  Relative      08  Other (Specify: \_\_\_\_\_)

1c. **IWER: Record sex of household member, if NOT CLEAR, ask whether person is Male or Female.** (*Please check ✓ ONLY ONE*). . . . .  Male       Female

1d. What was (*his/her*) age on (*his/her*) last birthday? . . . . .

1e. Is (*he/she*): (*Please check ✓ ONLY ONE*).  
 01  Married      03  Divorced      05  Married, but apart  
 02  Widowed      04  Separated      06  Single, never married

1f. How many years of schooling has (*he/she*) completed? . . . . .

1g. Does (*he/she*) have a: (*Please check ✓ ONLY ONE*).  
 01  High School Diploma      02  GED Certificate      03  Neither

**[If the response to 1d is age 19 or less ask question 1h.]**

1h. Did (*he/she*) work on the farm at any time during 1998? . . . . .  Yes       No

First, I have a few questions about your farm or ranch operation.

1. Of the farm or ranch income reported, which of these categories represents the largest portion of the gross income from the operation

- Grains and Oilseeds** ..... 01   
*(corn, sorghum, small grains, rice, soybeans, dry beans, dry peas, sunflowers, flaxseed, popcorn, grain silage and forage, grains and oilseeds for seed)*
- Tobacco** ..... 02
- Cotton** ..... 03
- Vegetables and Melons** ..... 04   
*(potatoes, sweet potatoes, beets, cabbage, cantaloupes, pumpkins sweet corn, tomatoes, watermelons, vegetable seed and others)*
- Fruit, Tree Nuts and Berries** ..... 05   
*(apples, blueberries, cherries, cranberries, grapes, oranges, kiwi fruit peaches, pears, strawberries, almonds, hazelnuts, pecans, walnuts and others)*
- Nursery, Greenhouse and Floriculture** ..... 06   
*(cut flowers, potted plants, bedding plants, foliage plants, sod, mushrooms Christmas trees, bulbs, nursery stock, shrubbery, flower seed and others)*
- Other Crops** ..... 07   
*(hay, peanuts, sugarbeets, sugarcane, mint, hops, grass seed, maple syrup)*
- Beef Cattle** ..... 08   
*(beef cattle for breeding stock, fed cattle, stockers and feeders, veal calves)*
- Dairy** ..... 09   
*(milk and other dairy products, sales of dairy animals)*
- Hogs** ..... 10
- Sheep, Goats, Wool and Mohair** ..... 11
- Equine** ..... 12   
*(horses, ponies, mules, donkeys, burros)*
- Poultry and Eggs** ..... 13   
*(chickens, broilers, eggs, turkeys, ducks, geese, pheasants, poultry products hatcheries)*
- Aquaculture** ..... 14   
*(catfish, trout and other finfish, and shellfish)*
- Other Animals** ..... 15   
*(fur-bearing animals, bees, honey, rabbits, and other animal specialties)*

2. How many acres are included in this operation?

- 01  < 100                      05  701-999
- 02  101-300                    06  > 1000
- 03  301-500                    07  Don't know
- 04  501-700                    09  Refused

3. Approximately how many people under the age of 20 visited the farm during 1998? .....

4. Approximately how many people under the age of 20 (excluding those previously mentioned) worked on the farm during 1998?

4a. Please indicate the names, ages and gender of all workers under the age of 20.

Names of Person(s) Under 20 Years of Age	Age	Gender	
		Male	Female
a.		<input type="checkbox"/>	<input type="checkbox"/>
b.		<input type="checkbox"/>	<input type="checkbox"/>
c.		<input type="checkbox"/>	<input type="checkbox"/>
d.		<input type="checkbox"/>	<input type="checkbox"/>
e.		<input type="checkbox"/>	<input type="checkbox"/>
f.		<input type="checkbox"/>	<input type="checkbox"/>
g.		<input type="checkbox"/>	<input type="checkbox"/>

5. Do you require farm workers to have any type of training?  
**01**  Yes (Specify: \_\_\_\_\_) **07**  Don't Know  
**03**  No **09**  Refused

6. Do you provide any training for workers on your farm?  
**01**  Yes (Specify: \_\_\_\_\_) **07**  Don't Know  
**03**  No **09**  Refused

**Next, I'm going to ask you some questions about any injuries to children or adolescents under the age of 20 that occurred on the farm during 1998.**

7. During 1998, did anyone on the farm under the age of 20 experience any injuries which required at least 4 hours of restricted activity or required professional medical attention? These injuries would include those resulting from farm work, chores or recreation on the farm or in the home.  
**01**  Yes **07**  Don't Know  
**03**  No [These are all the questions I have for you today. Thank you for your time] **09**  Refused

8. How many child/adolescent injuries of this type occurred on the farm during 1998?

**Now we would like to get some information on each of these injuries.**

9. Starting with the most recent child/adolescent injury, what is the first name of the injured person?

10. What was the age of this person at the time of the injury?

11. What is the injured person's race?  
**01**  White **05**  Other (Specify: \_\_\_\_\_)  
**02**  Black **77**  Don't Know  
**03**  Native American/American Indian **99**  Refused  
**04**  Asian/Pacific Islander

12. What is the injured person's ethnic background, is it Hispanic or something else?

- 01  **Hispanic**  
02  **Non-hispanic**

13. In what month did this injury occur?

- 01  **January**                      08  **August**  
02  **February**                      09  **September**  
03  **March**                              10  **October**  
04  **April**                                11  **November**  
05  **May**                                 12  **December**  
06  **June**                                77  **Don't Know**  
07  **July**                                 99  **Refused**

**IWER: If over 16 and the person resides in this household, ask to speak to that person. If injured person is not part of this household, is not available, or is under 16 continue interviewing respondent.**

14. Did (you/the injured person) live on the farm?

- 01  **Yes**                                77  **Don't Know**  
03  **No**                                 99  **Refused**

15. Did this injury occur while working, visiting, doing chores or during recreational activities on the farm?

- 01  **Working**                                05  **Other (Specify \_\_\_\_\_)**  
02  **Visiting [Skip to 19]**                      77  **Don't Know**  
03  **Chores [Skip to 19]**                      99  **Refused**  
04  **Recreational Activities [Skip to 19]**

16. During 1998, how many week did (you/the injured person) work on the farm? .....

17. At the time of the injury, how many hours per week did (you/the injured person) typically work on the farm?

- 01  **0-10**                                      05  **More than 40**  
02  **11-20**                                77  **Don't Know**  
03  **21-30**                                99  **Refused**  
04  **31-40**

18. Was (your/the injured person's) supervisor in the immediate area at the time of the injury?

- 01  **Yes**                                      77  **Don't Know**  
03  **No**                                      99  **Refused**

19. How much experience did (you/the injured person) have in performing the task you were doing at the time of the injury?

- 01  **None**                                      06  **More than 1 month to 12 months**  
02  **< 4 hours**                                07  **More than 1 year**  
03  **More than 4 hours to 8 hours**                      77  **Don't Know**  
04  **More than 1 day to 7 days**                      99  **Refused**  
05  **More than 1 week to 4 weeks**

20. What is (your/the injured person's) relationship to the farm family?

- 01  **Self**                                      07  **Boarder**  
02  **Spouse**                                08  **Other (Specify \_\_\_\_\_)**  
03  **Child/Step-Child**                      09  **Worker**  
04  **Parent**                                 10  **Visitor**  
05  **Sibling**                                 77  **Don't Know**  
06  **Other Relative**                      99  **Refused**

21. Where on the farm did the injury occur?

- 01  Crop Field, Orchard, Nursery
- 02  Pasture
- 03  In the Farm Yard
- 04  Grain Storage/Silo
- 05  Farm Outbuilding
- 06  Barn
- 07  Farm Roadway
- 08  Public Roadway

- 09  In the House
- 10  Garage
- 11  House Yard
- 12  Driveway/Sidewalk
- 13  Outdoors, General
- 14  Other (Specify: \_\_\_\_\_)
- 77  Don't Know
- 99  Refused

22. Now I would like for you to describe in as much detail as possible how the injury occurred. Include where the injury occurred, what tasks were being completed, what equipment was being used or materials being handled, and any other factors you think might be important. **[IWER: PROBE FOR DETAIL]**

**Interviewer Checklist**

- Location**  
Barn, field, house
- Specific activity**
- Equipment & Tools**  
Powered-- On/Off  
Using/Cleaning
- Materials handled**  
Ag Chemicals,  
Fertilizer, etc.
- Other Factors**

**NIOSH USE ONLY:**

\_\_\_\_\_ SOURCE

\_\_\_\_\_ EVENT

\_\_\_\_\_ 2<sup>nd</sup> Source

\_\_\_\_\_ E-CODE

23. What part of the body was injured? (Please ✓ ALL that apply)
- |   |  |
|---|--|
| 01 <input type="checkbox"/> Head/Skull          | 08 <input type="checkbox"/> Hand/Wrist/Fingers     |
| 02 <input type="checkbox"/> Face                | 09 <input type="checkbox"/> Leg                    |
| 03 <input type="checkbox"/> Neck                | 10 <input type="checkbox"/> Foot/Ankle/Toes        |
| 04 <input type="checkbox"/> Shoulder/Chest/Back | 11 <input type="checkbox"/> Internal Injuries      |
| 05 <input type="checkbox"/> Abdomen             | 12 <input type="checkbox"/> Other (Specify: _____) |
| 06 <input type="checkbox"/> Pelvic Region       | 77 <input type="checkbox"/> Don't Know             |
| 07 <input type="checkbox"/> Arm                 | 99 <input type="checkbox"/> Refused                |
24. What type of injury occurred to the \_\_\_\_\_ (Specify body part)? (Please ✓ ALL that apply)
- |   |  |
|---|--|
| 01 <input type="checkbox"/> Scrape/Abrasion             | 09 <input type="checkbox"/> Crushed/Mangled              |
| 02 <input type="checkbox"/> Bruise/Contusion            | 10 <input type="checkbox"/> Loss of Body Part/Amputation |
| 03 <input type="checkbox"/> Sprain/Strain/Torn Ligament | 11 <input type="checkbox"/> Nerve Injury                 |
| 04 <input type="checkbox"/> Broken Bone/Fracture        | 12 <input type="checkbox"/> Burn/Blister/Scald           |
| 05 <input type="checkbox"/> Dislocation                 | 13 <input type="checkbox"/> Other (Specify: _____)       |
| 06 <input type="checkbox"/> Cut/Laceration              | 77 <input type="checkbox"/> Don't Know                   |
| 07 <input type="checkbox"/> Puncture/Stab/Jab           | 99 <input type="checkbox"/> Refused                      |
| 08 <input type="checkbox"/> Traumatic Rupture           |  |
25. How long were/was (your/the injured person's) normal activities restricted as a result of this injury?
- |  |   |
|--|---|
| 01 <input type="checkbox"/> No restriction               | 06 <input type="checkbox"/> 1 month to less than 3 months |
| 02 <input type="checkbox"/> Less than 1 day              | 07 <input type="checkbox"/> 3 months or more              |
| 03 <input type="checkbox"/> 1 day to less than 7 days    | 77 <input type="checkbox"/> Don't Know                    |
| 04 <input type="checkbox"/> 7 days to less than 14 days  | 99 <input type="checkbox"/> Refused                       |
| 05 <input type="checkbox"/> 14 days to less than 1 month |   |
26. At this time, are activities still restricted as a result of this injury?
- |   |  |
|---|--|
| 01 <input type="checkbox"/> Yes             | 77 <input type="checkbox"/> Don't Know |
| 03 <input type="checkbox"/> No [Skip to 28] | 99 <input type="checkbox"/> Refused    |
27. Did the injury result in a permanent disability?
- |                                 |  |
|---------------------------------|--|
| 01 <input type="checkbox"/> Yes | 77 <input type="checkbox"/> Don't Know |
| 03 <input type="checkbox"/> No  | 99 <input type="checkbox"/> Refused    |
28. On a scale of 1 to 5, how would you rate the overall seriousness of this injury, with 1 being minor and 5 being life-threatening?
- |                                      |  |
|--------------------------------------|--|
| 01 <input type="checkbox"/> Minor    | 05 <input type="checkbox"/> Life-threatening |
| 02 <input type="checkbox"/> Moderate | 77 <input type="checkbox"/> Don't Know       |
| 03 <input type="checkbox"/> Serious  | 99 <input type="checkbox"/> Refused          |
| 04 <input type="checkbox"/> Severe   |  |
29. Did this injury require medical attention?
- |  |  |
|--|--|
| 01 <input type="checkbox"/> Yes              | 77 <input type="checkbox"/> Don't Know |
| 03 <input type="checkbox"/> No [Skip to end] | 99 <input type="checkbox"/> Refused    |
30. Where did the injured person receive treatment for this injury?
- |  |  |
|--|--|
| 01 <input type="checkbox"/> Doctor's Office or Clinic        | 06 <input type="checkbox"/> Chiropractor           |
| 02 <input type="checkbox"/> Hospital Emergency Department    | 07 <input type="checkbox"/> At the Scene           |
| 03 <input type="checkbox"/> Non-emergency clinic at Hospital | 08 <input type="checkbox"/> Other (Specify: _____) |
| 04 <input type="checkbox"/> Public Clinic                    | 77 <input type="checkbox"/> Don't Know             |
| 05 <input type="checkbox"/> Dentist                          | 99 <input type="checkbox"/> Refused                |
31. Did this injury require admission to a hospital?
- |  |  |
|--|--|
| 01 <input type="checkbox"/> Yes              | 77 <input type="checkbox"/> Don't Know |
| 03 <input type="checkbox"/> No [Skip to end] | 99 <input type="checkbox"/> Refused    |



32. How long was the hospitalization? .....

**IWER: If more than one injury was reported in question 8 return to 9 until information has been gathered on all injuries.**

Now, I'd like some information on the next injury....

**CLOSING:**

**THAT'S ALL THE QUESTIONS I HAVE FOR YOU TODAY.  
THANK YOU VERY MUCH FOR YOUR TIME.  
WE HOPE THIS INFORMATION WILL HELP US LEARN MORE  
ABOUT HOW TO PREVENT OTHER YOUNG PEOPLE FROM  
HAVING INJURIES.**

**HAVE A GOOD (DAY/EVENING)**

## Appendix B: Sample-based Estimators



1. Sampling Estimators and Variance Estimators for Injury and Youth Estimates:

$$y = \sum_{h=1}^L N_h \bar{y}_h = \text{national total of the variable of interest (i.e., injury or youth),}$$

$$v(y) = \sum_{h=1}^L N_h (N_h - n_h) \frac{s_h^2}{n_h} = \text{variance of } y,$$

where:

$$\bar{y}_h = \sum_{i=1}^{n_h} \frac{y_{hi}}{n_h} = \text{mean of stratum } h ;$$

$N_h \bar{y}_h$  = stratum total of the variable of interest (i.e., injury or youth);

$$s_h^2 = \frac{\sum_{i=1}^{n_h} (y_{hi} - \bar{y}_h)^2}{n_h - 1} = \text{variance of stratum } h;$$

$n_h$  = number of farms sampled in stratum  $h$  ;

$N_h$  = number of farms in stratum  $h$  based on the 1997 Census of Agriculture;

$L$  = number of strata (i.e., regions).

2. Sampling Estimators and Variance Estimators for Injury Rates:

$$R = \frac{Y}{x} \cdot 100 = \text{rate of injury per 100 youth,}$$

$$v(R) = 100^2 \left(\frac{1}{x}\right)^2 [v(y) + R^2 v(x) - 2R \text{cov}(y, x)] = \text{variance of } R,$$

where:

$y$  = estimate for number of injuries;

$x$  = number of youth at risk for the injuries defined in  $y$ ;

$v(y)$  = variance of  $y$ ;

$v(x)$  = variance of  $x$ ;

$\text{cov}(y, x)$  = covariance between  $y$  and  $x$ .

Alternatively, the variance for  $R$  can be determined by:

$$v(R) = 100^2 R^2 [rse(y)^2 + rse(x)^2 - 2 r\text{cov}(y, x)],$$

where:

$$rse(y) = \frac{s(y)}{y} = \text{relative standard error of } y;$$

$$s(y) = \sqrt{v(y)} = \text{standard error of } y;$$

$$rse(x) = \frac{s(x)}{x} = \text{relative standard error of } x;$$

$$s(x) = \sqrt{v(x)} = \text{standard error of } x;$$

$$r\text{cov}(y, x) = \frac{\text{cov}(y, x)}{\bar{y} \bar{x} \sqrt{n}} = \text{relative covariance between } y \text{ and } x.$$

Because the relative covariance between the estimated number of injuries,  $y$ , and the estimated number of youth exposed,  $x$ , is generally negligible, the estimate of the variance of the rate may be approximated by:

$$v(R) = 100^2 R^2 [rse(y)^2 + rse(x)^2],$$

where  $rse(y)$  and  $rse(x)$  are as defined previously.



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