

National Injury and Fatality Data for Aging Farmers

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Aging Farmers and Farm Workers

- Recognized as a high risk group for fatal work injuries for some time:
 - Purschwitz and Fields, 1986
 - Myers and Hard, 1995
 - Fiedler et al., 1998
 - Meyer, 2005



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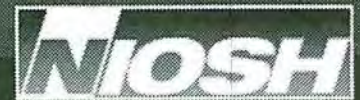


Aging Farmers and Farm Workers

- Other research found that these same workers are at lower risk for non-fatal work injuries:
 - Hoskins et al., 1988
 - Myers, 1990
 - Crawford et al., 1998



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Aging Farmers and Farm Workers

- Objective:
 - Provide current information on older farmers and farm workers, both for fatal and non-fatal injury
 - Compare to older workers in all industries
 - Compare to younger farmers and farm workers



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Methods



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General

- Farming = production agriculture. Will not address forestry, logging, or fishing issues.
- Only looking at occupational injuries and fatalities.
- Include both farmers and farm workers.
- Older workers defined as those more than 54 years old.



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Non-fatal Injuries

- Non-fatal injuries are from the NIOSH Occupational Injury Surveillance of Production Agriculture Survey for the years 2001 and 2004.
- Farm operator survey collected for NIOSH by the National Agricultural Statistics Service
- Sample covers all types of farms regardless of the size of the operation.



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Fatalities

- Fatalities are from the Bureau of Labor Statistics (BLS), Census of Fatal Occupational Injuries (CFOI) surveillance system for the years 1992 through 2004.
- Special research files for CFOI provided to NIOSH by BLS exclude data for New York City.
- Covers all farms regardless of the size of the operation.



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Fatalities

- Detailed results also obtained from the NIOSH Fatality Assessment and Control Evaluation (FACE) program.
- In-depth investigations of occupational fatalities. Includes State-Face reports
- Assess tractor overturn fatalities.



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Employment

- Employment information, for the purpose of calculating rates, was obtained from the BLS, Current Population Survey (CPS).
- Monthly national household survey that provides annual average employment estimates.
- Sample covers all farms regardless of the size of the operation.



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Results



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Employment

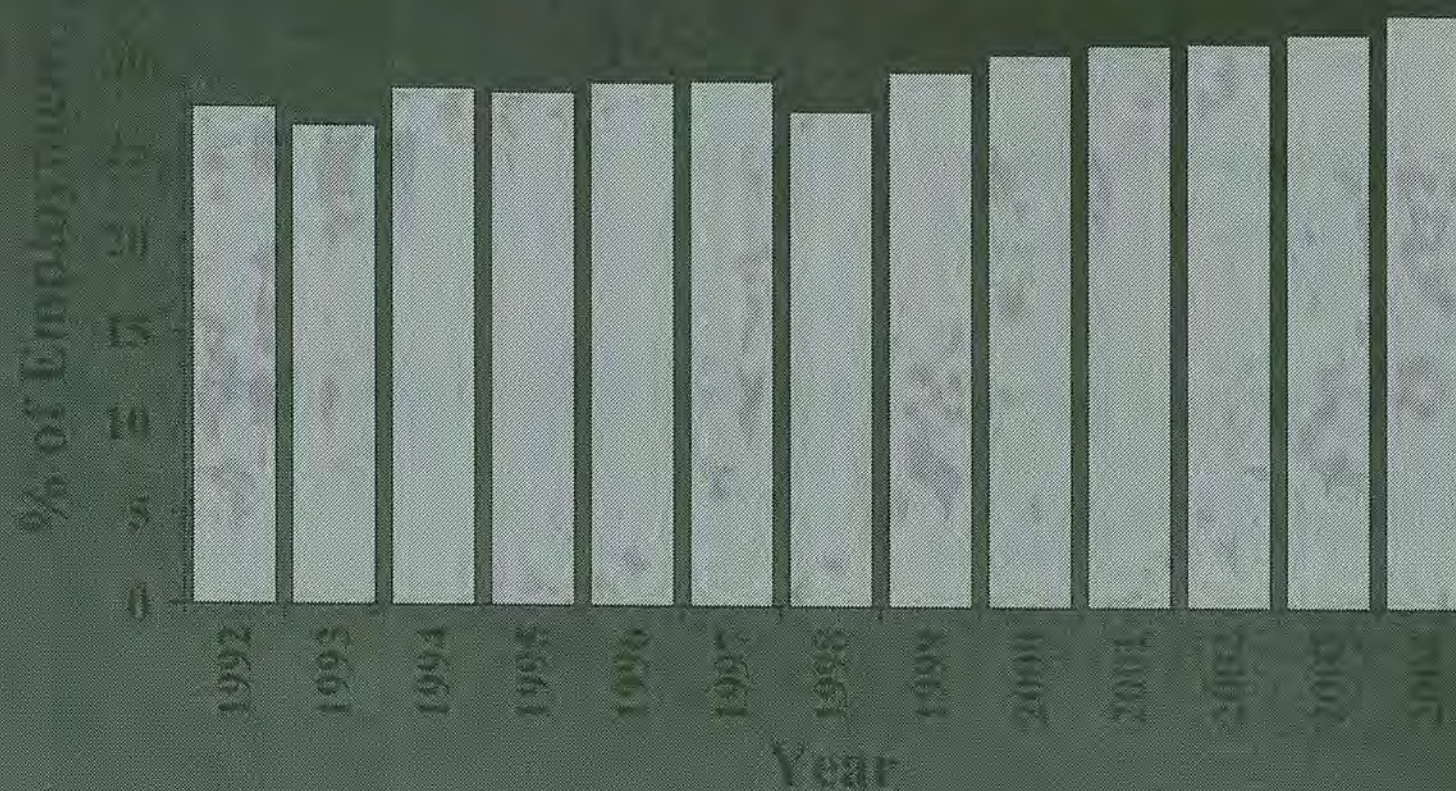
- Between 1992-2004, 13% of the US civilian workforce was over 54 years old.
- Only 3.5% of the civilian workforce over 54 years old worked on farms.
- However, this 3.5% of the older civilian workforce accounted for 29% of the farming workforce.



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Percentage of farming workforce over 54 years old by year, 1992-2004



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Non-fatal Injuries

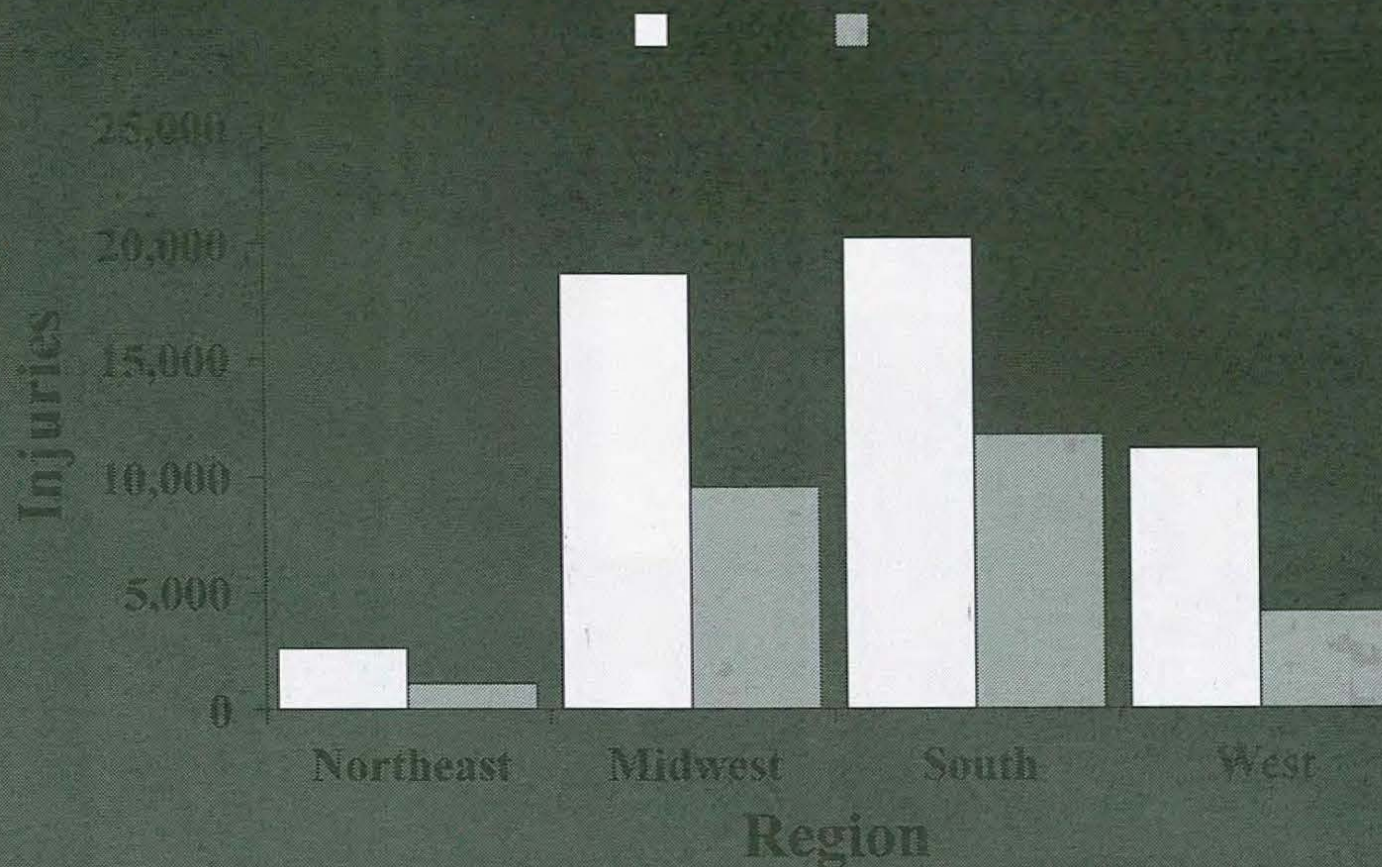
- There were an average of 83,900 farm-related lost-time injuries to adults over the age of 19 years between 2001 and 2004.
- Workers over 54 years old accounted for an average of 26,600 of these injuries.



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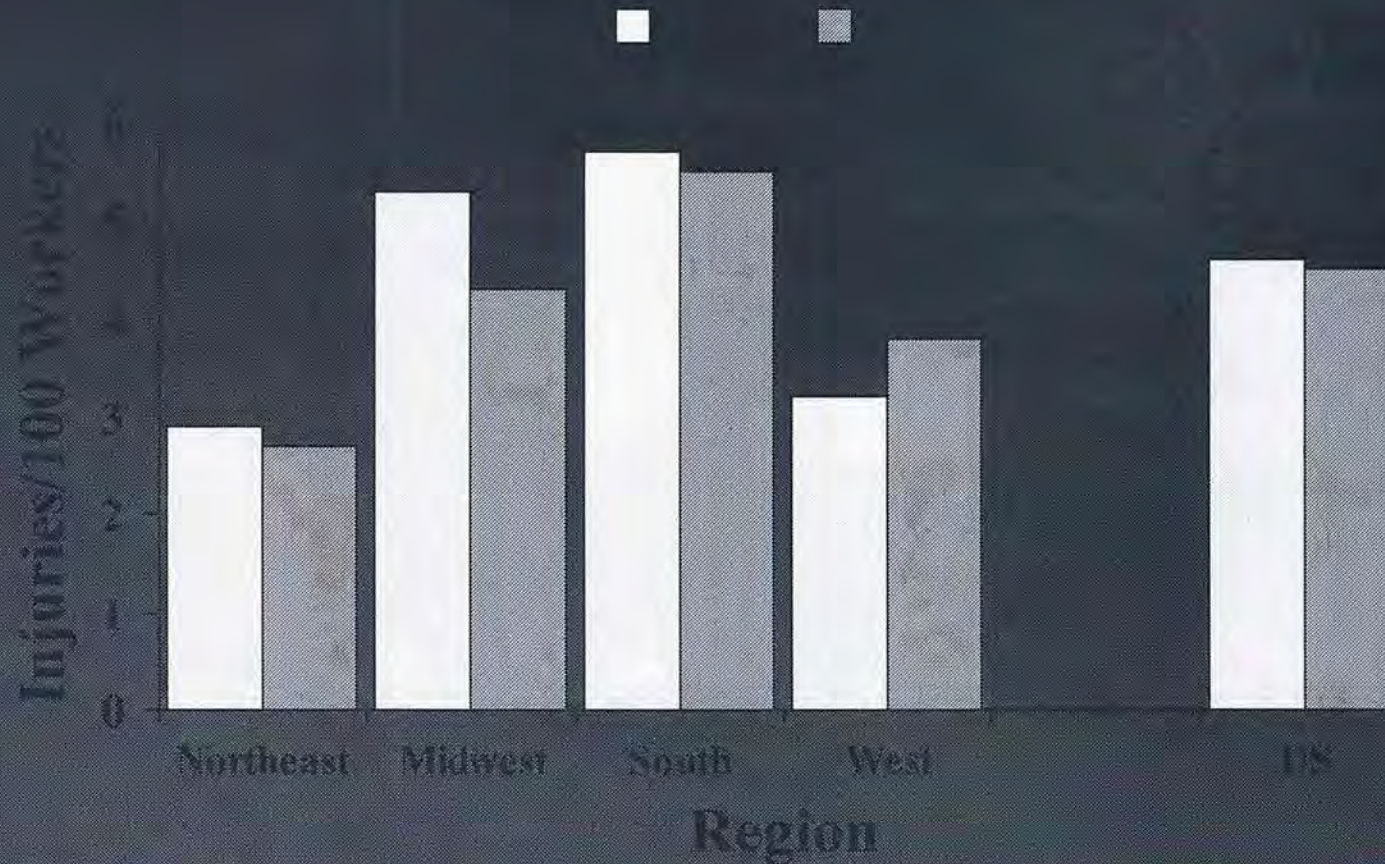
Farming injuries by age group and region of the United States, 2001-2004



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Farming injury rates by age group and region of the United States, 2001-2004



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Days of restricted work activity by age group, 2001-2004



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Restricted Activity

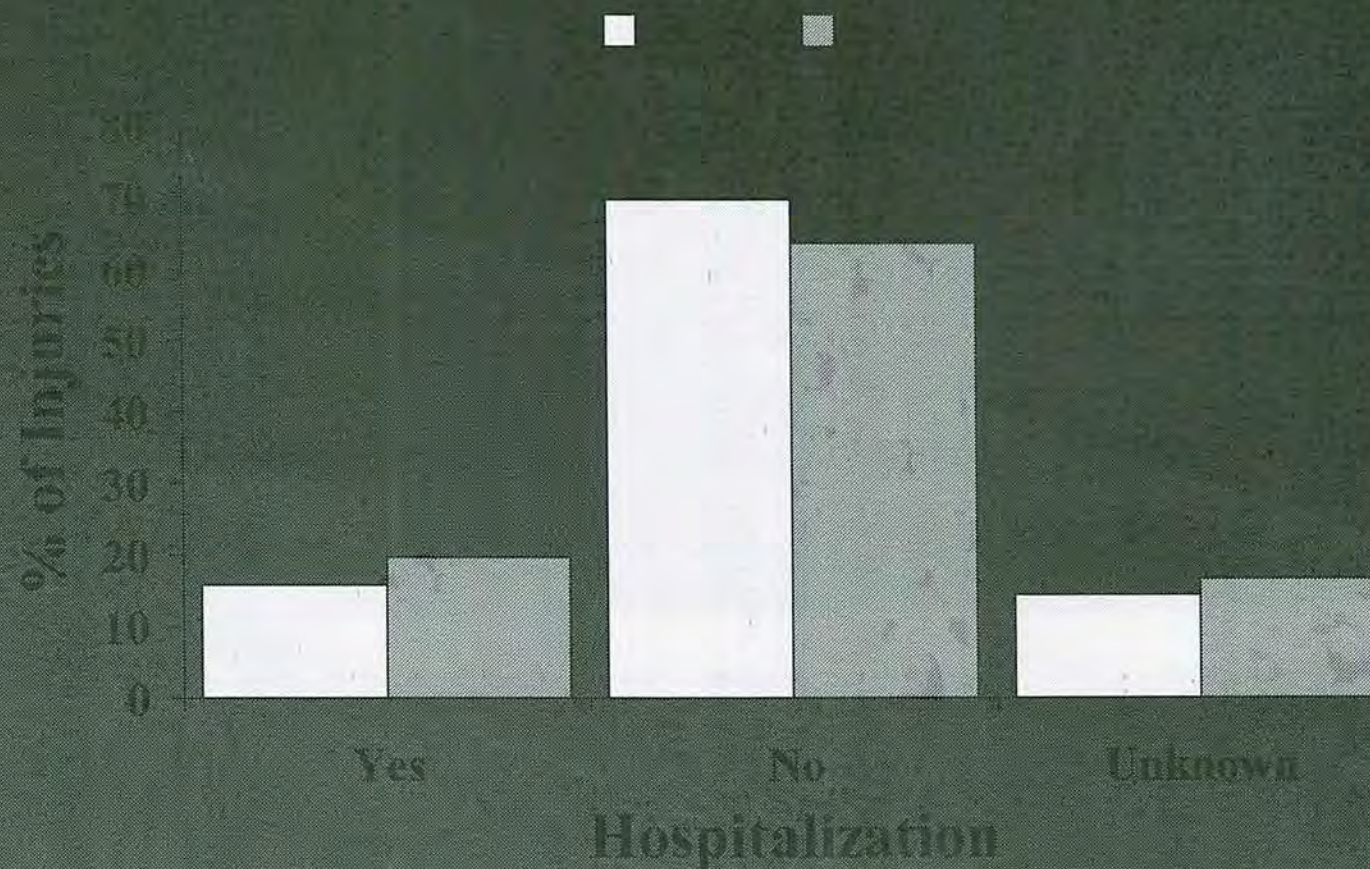
- Workers 20-54: 32% of injuries resulted in 14 or more restricted work days.
- Workers over 54 years old: 47% of injuries resulted in 14 or more restricted work days.



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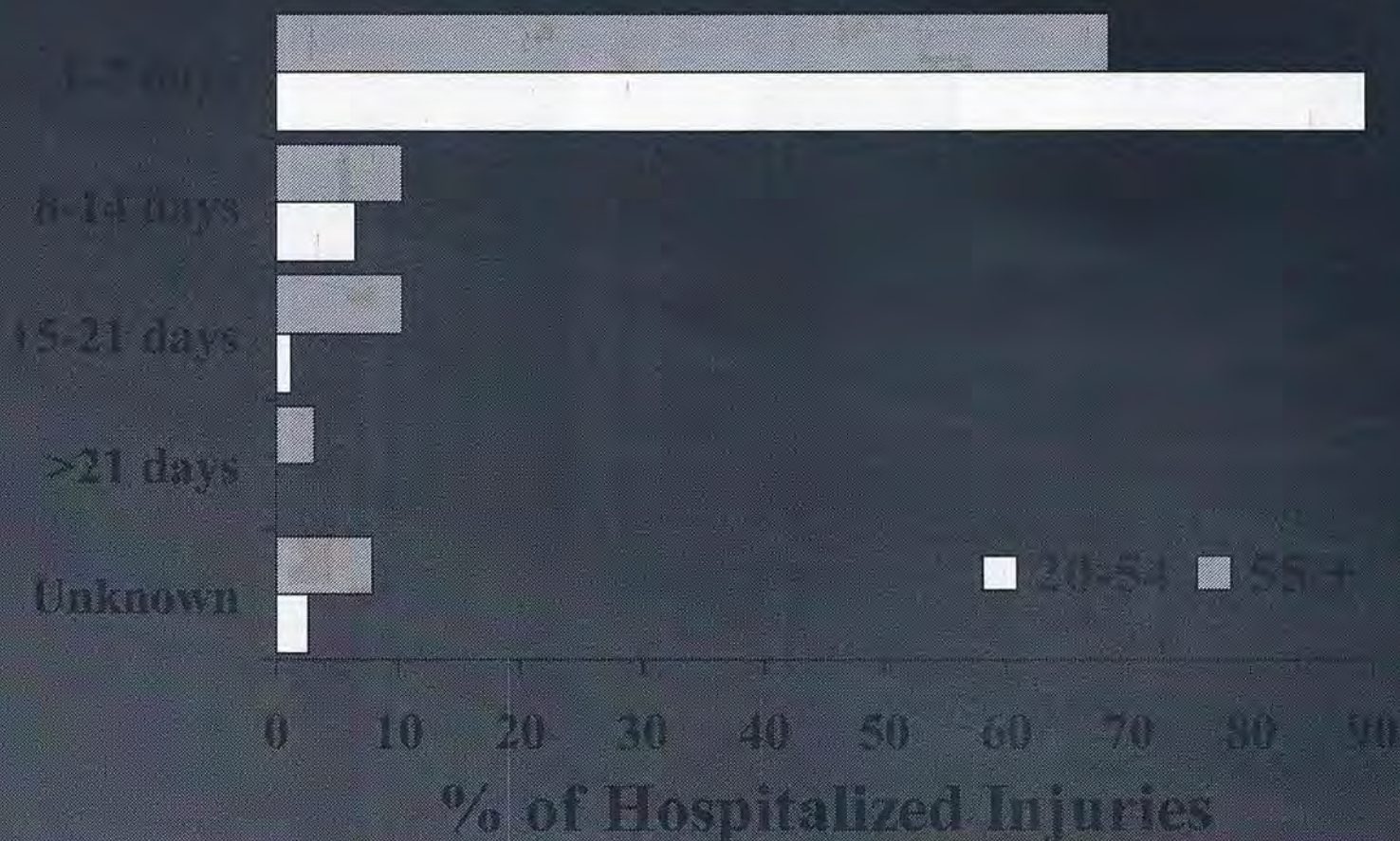
Farming injuries by age group and hospitalizations, 2001-2004



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Length of stay for hospitalized workers by age group, 2001-2004



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Length of Hospital Stay

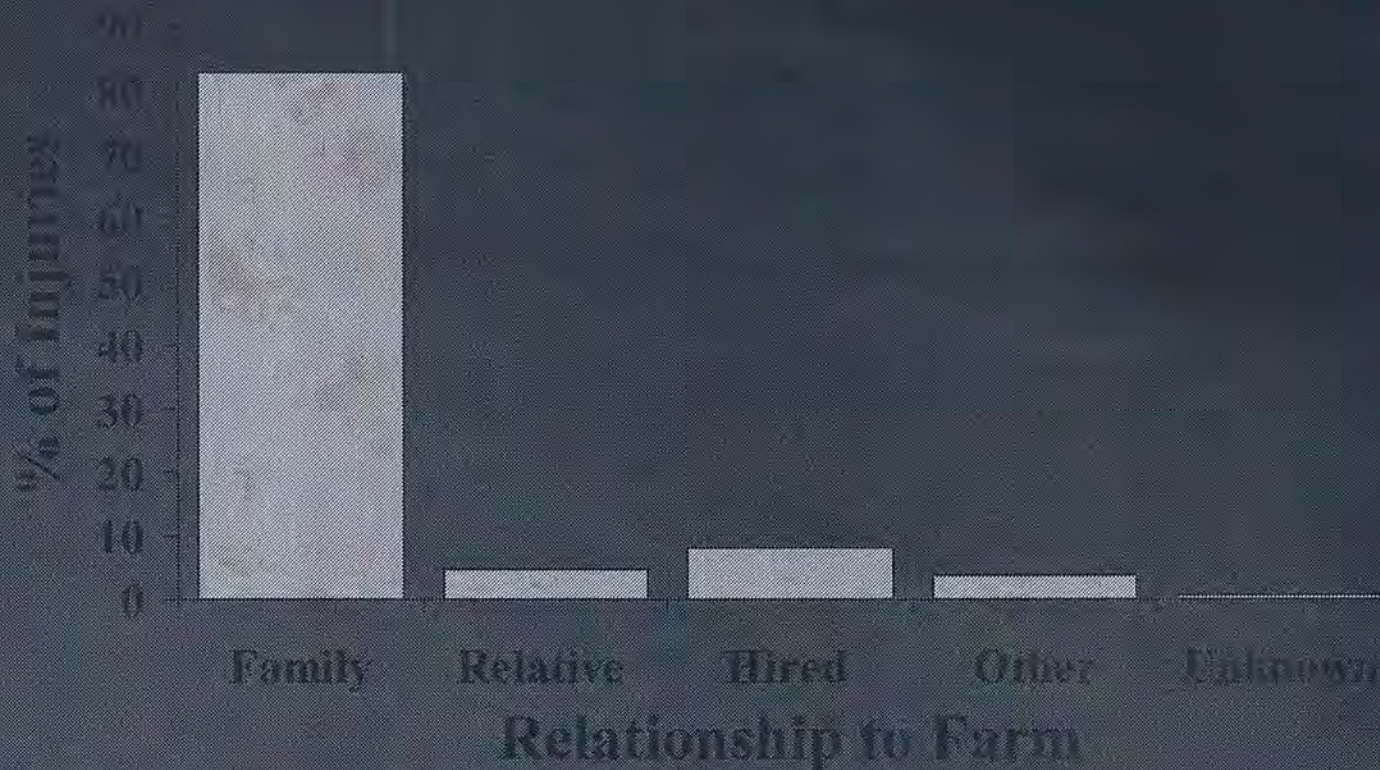
- Workers 20-54: 8% of hospitalized injuries involved stays of 8 or more days
- Workers over 54 years old: 24% of hospitalized injuries involved stays of 8 or more days.



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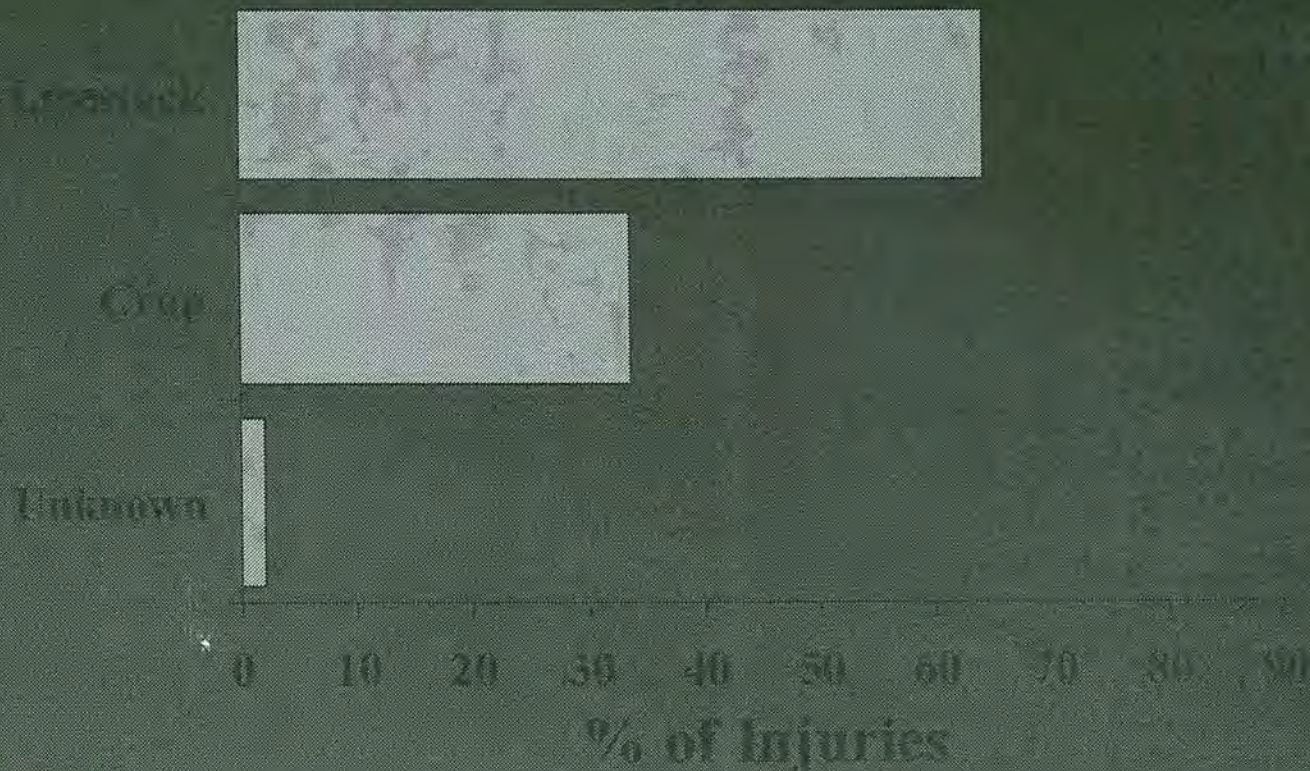
Farming injuries to workers over 54 years old by relationship to the farm, 2001-2004



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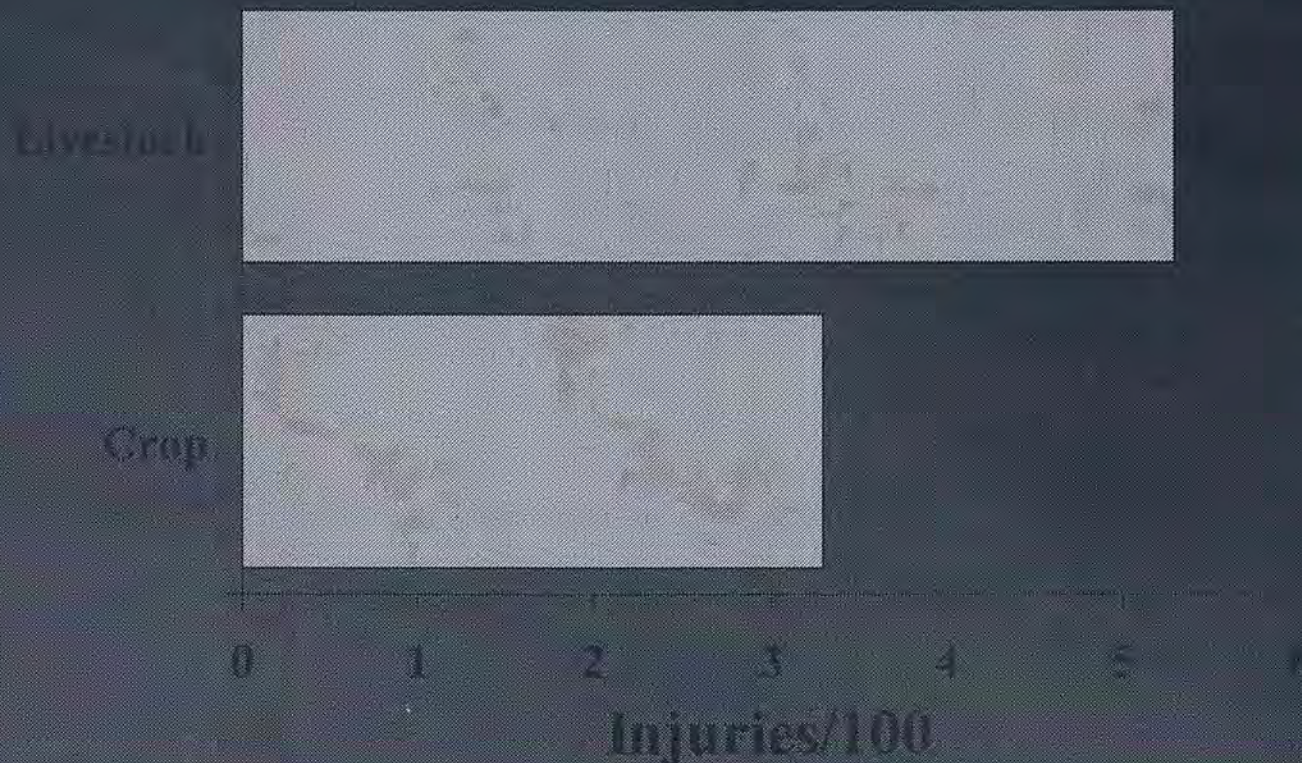
Farming injuries to workers over 54 years old by type of farm, 2001-2004



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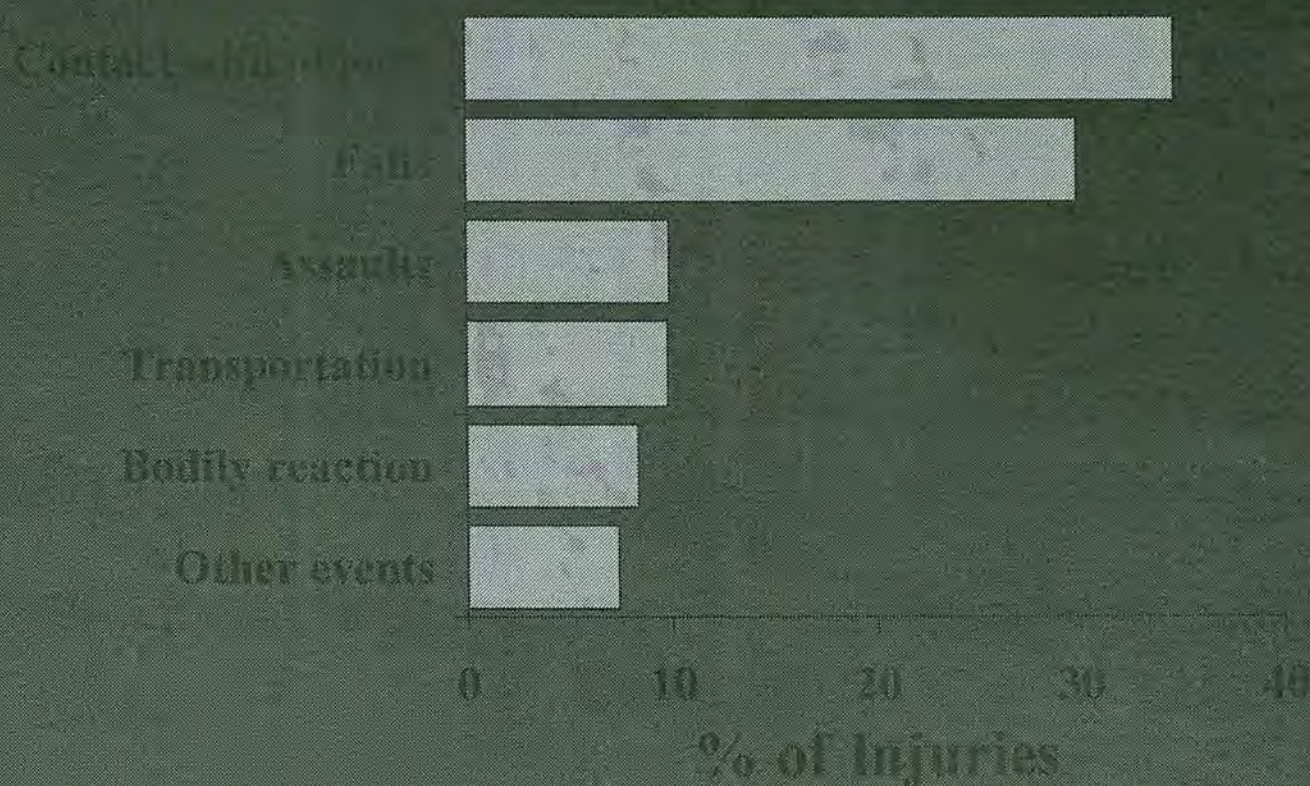
Farming injury rates to workers over 54 years old by type of farm, 2001-2004



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Farming injuries to workers over 54 years old by type of injury event, 2001-2004



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Farming injuries to workers over 54 years old by type of injury event, 2001-2004

- Contact with objects:
 - Struck by swinging or slipping objects (10%)
 - Struck by falling object (5%)
- Falls:
 - Fall same level (15%)
 - Fall from elevation (14%)



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Farming injuries to workers over 54 years old by type of injury event, 2001-2004

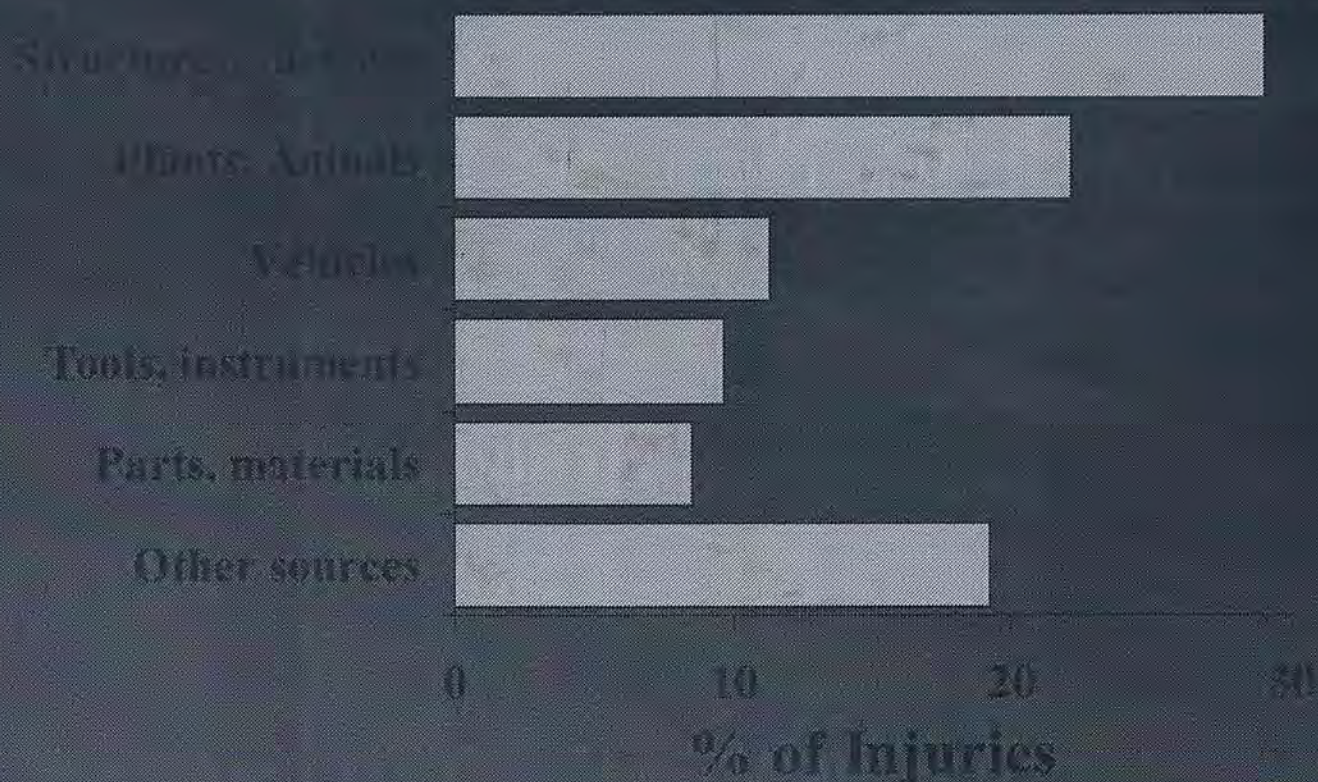
- Assaults:
 - Assault by animal (10%)
- Transportation:
 - Off-road non-collisions (7%)
- Bodily reactions:
 - Overexertion (5%)



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Farming injuries to workers over 54 years old by source of injury, 2001-2004



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Farming injuries to workers over 54 years old by source of injury, 2001-2004

- Structures and surfaces:
 - Floors, walkways, ground (21%)
 - Structural elements, e.g. gates, fences (7%)
- Plants and animals:
 - Cattle (8%)



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Farming injuries to workers over 54 years old by source of injury, 2001-2004

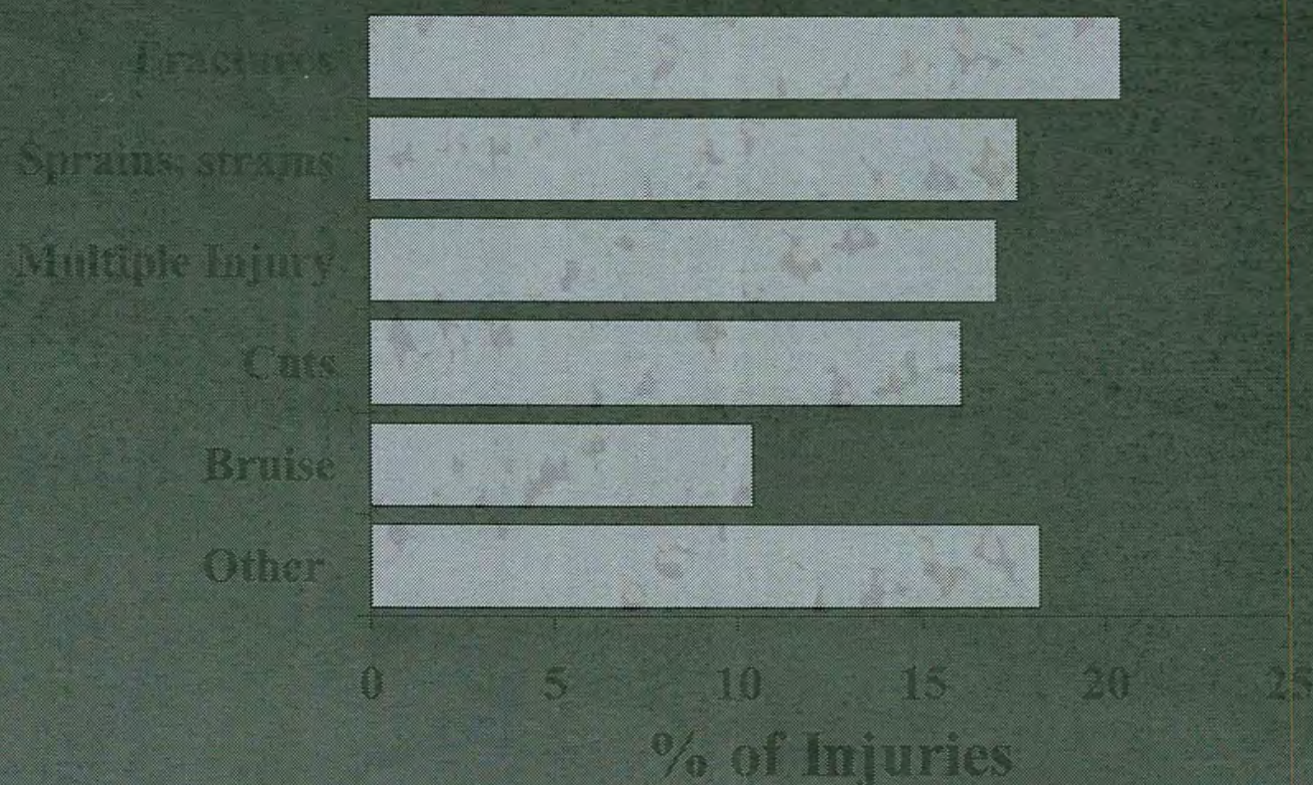
- Vehicles:
 - Tractors (7%)
- Tools and instruments:
 - Hand tools (9%)



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Farming injuries to workers over 54 years old by nature of injury, 2001-2004



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Fatal Injuries

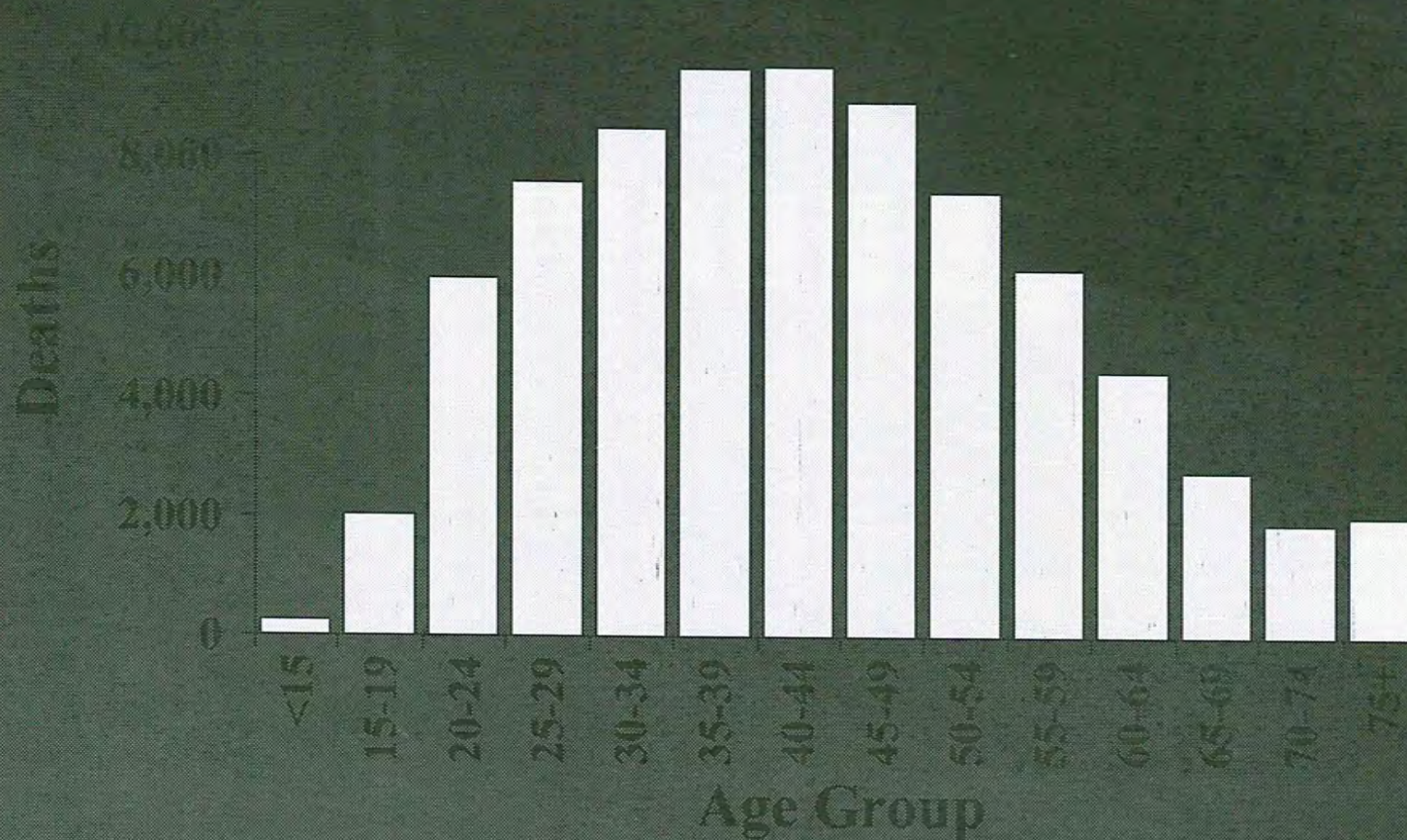
- Between 1992-2004, there were **75,327** occupational deaths in all industries.
- Workers over 54 years old accounted for **17,225** of these deaths.
- The overall fatality rate for this time period was **3.9/100,000** workers; the rate for older workers was **7.7/100,000** workers.



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Occupational deaths by age group for all workers, 1992-2004*



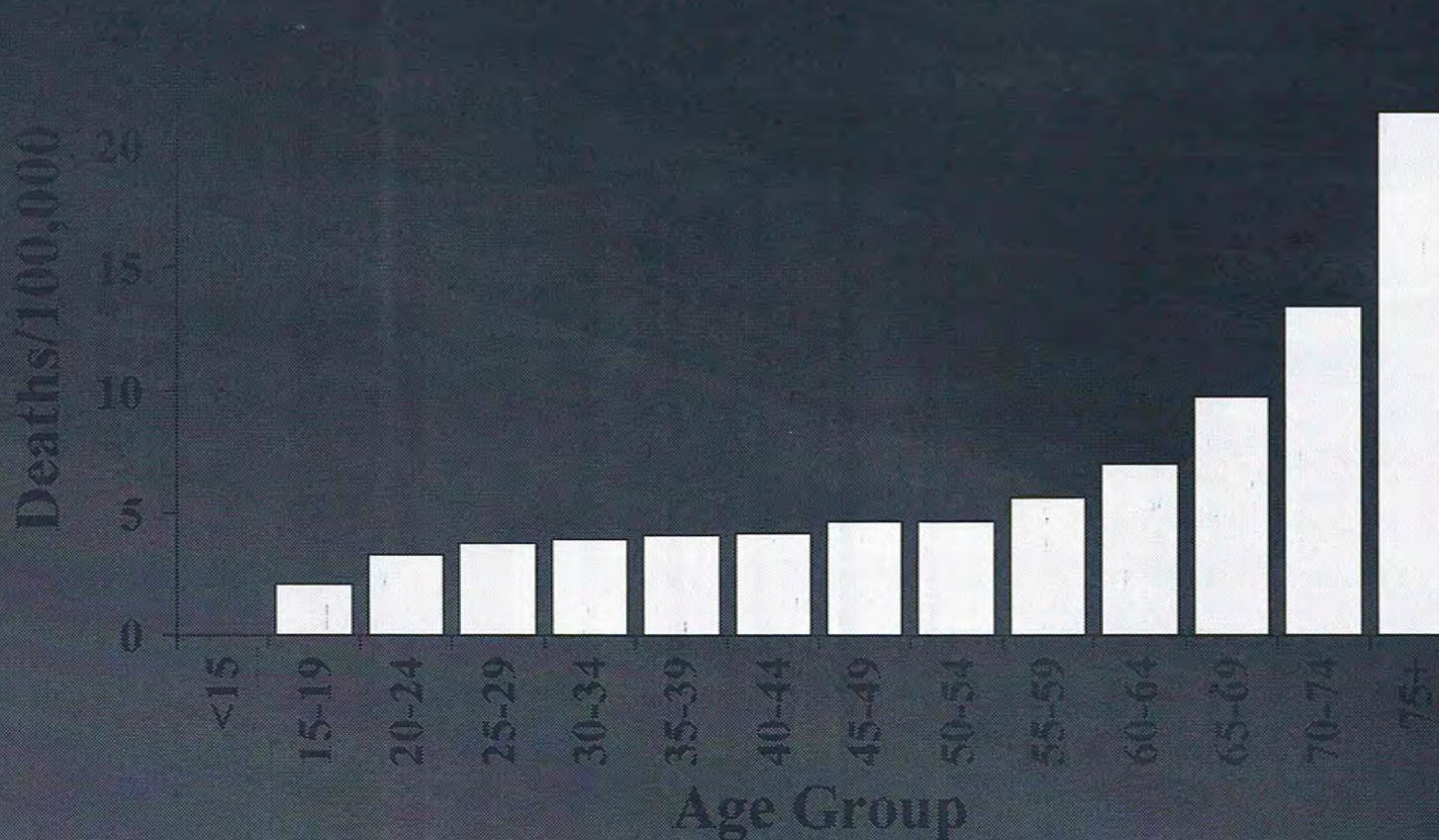
* Excludes New York City



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Occupational fatality rates by age group for all workers, 1992-2004*



* Excludes New York City. Rates calculated by NIOSH and may differ from BLS.



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Fatal Injuries

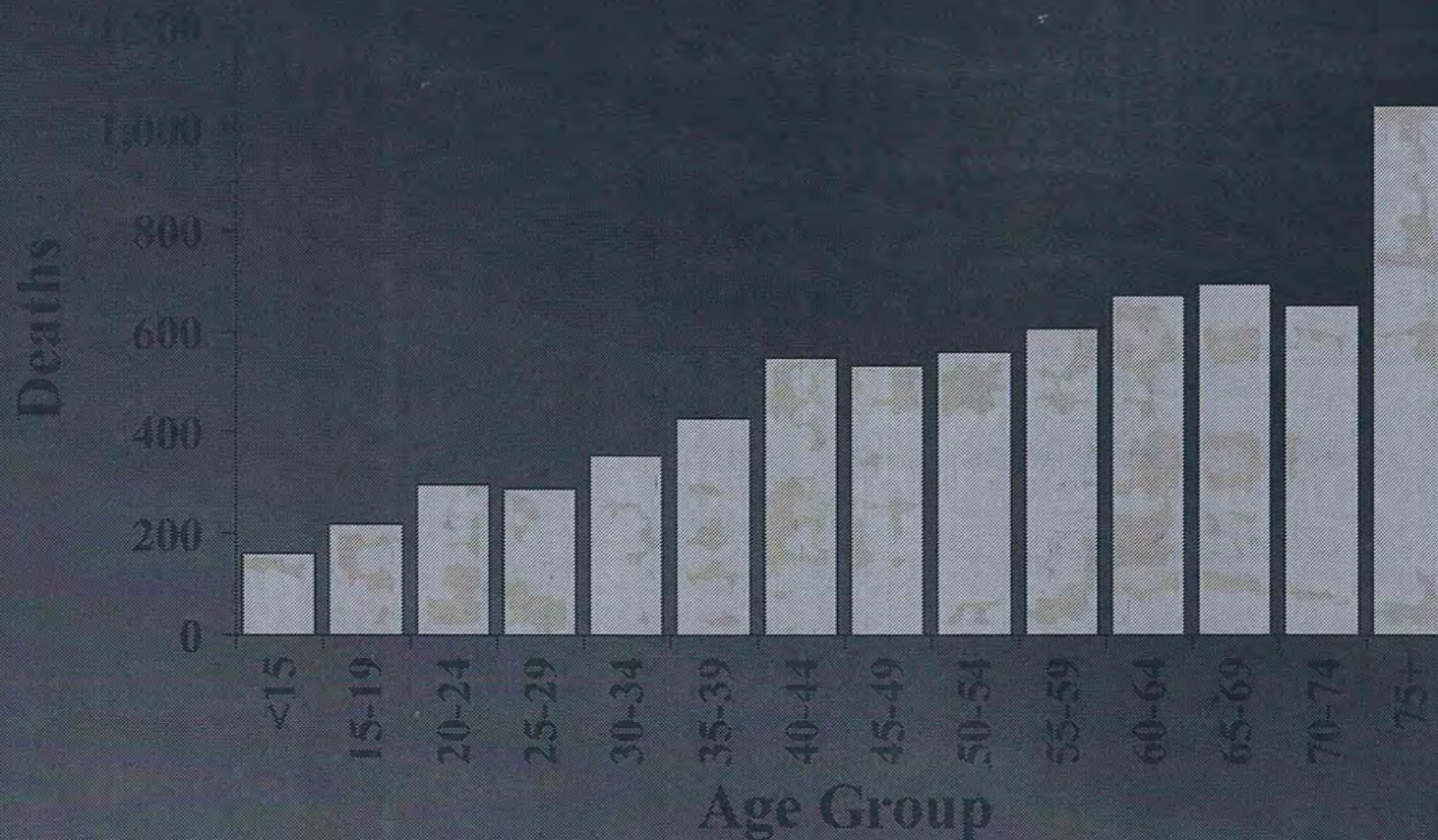
- 7,064 of these occupational deaths occurred to farmer and farm workers
- Workers over 54 years old accounted for 3,671 of these farming deaths.
- The farming fatality rate for all workers was 25.2/100,000 workers; the farming fatality rate for older workers was 45.8 /100,000 workers.



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Occupational deaths by age group for farming, 1992-2004*



* Excludes New York City



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Occupational fatality rates by age group for farming, 1992-2004*



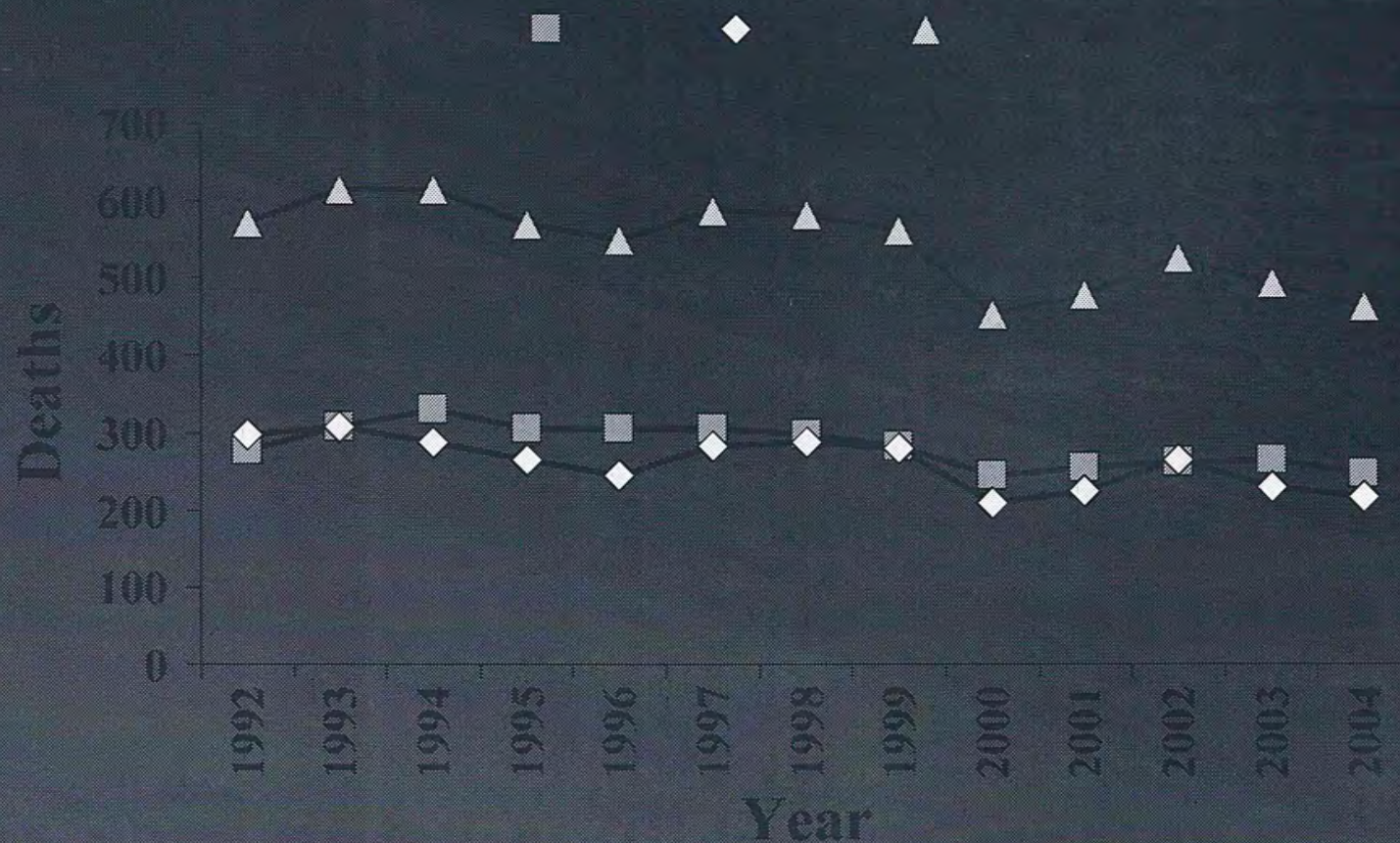
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Occupational fatalities by age group and year for farming, 1992-2004*

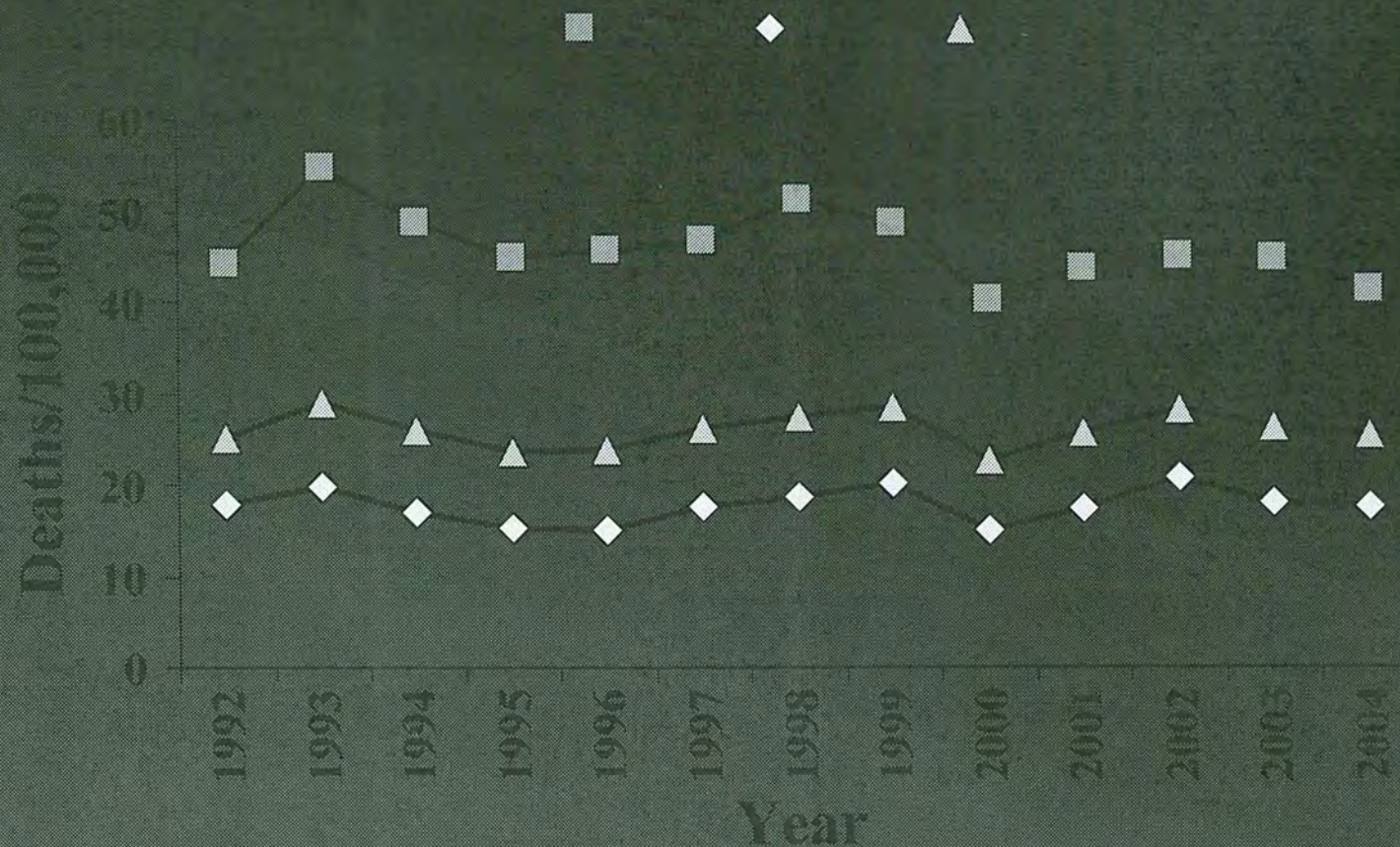


* Excludes New York City.

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Occupational fatality rates by age group and year for farming, 1992-2004*



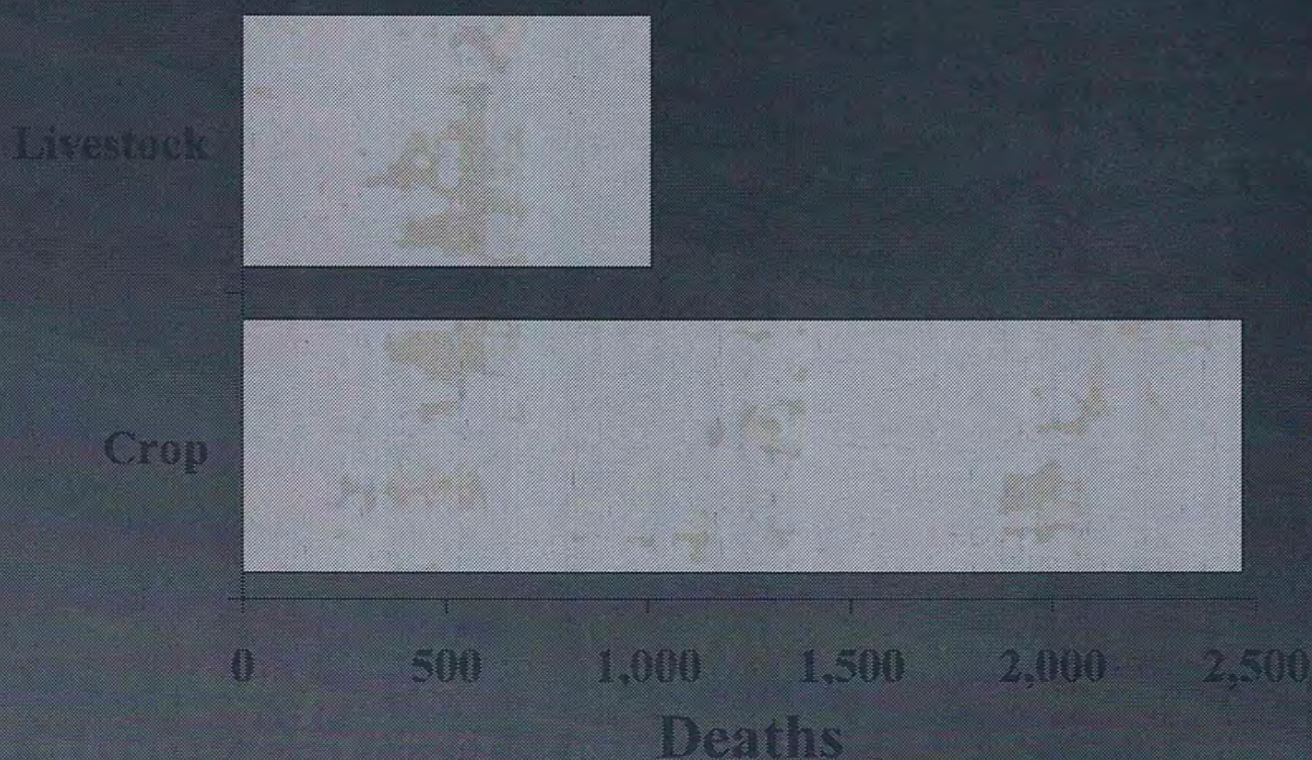
* Excludes New York City. Rates calculated by NIOSH and may differ from BLS.



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Farming fatalities to workers over 54 years old by type of farm, 1992-2004*

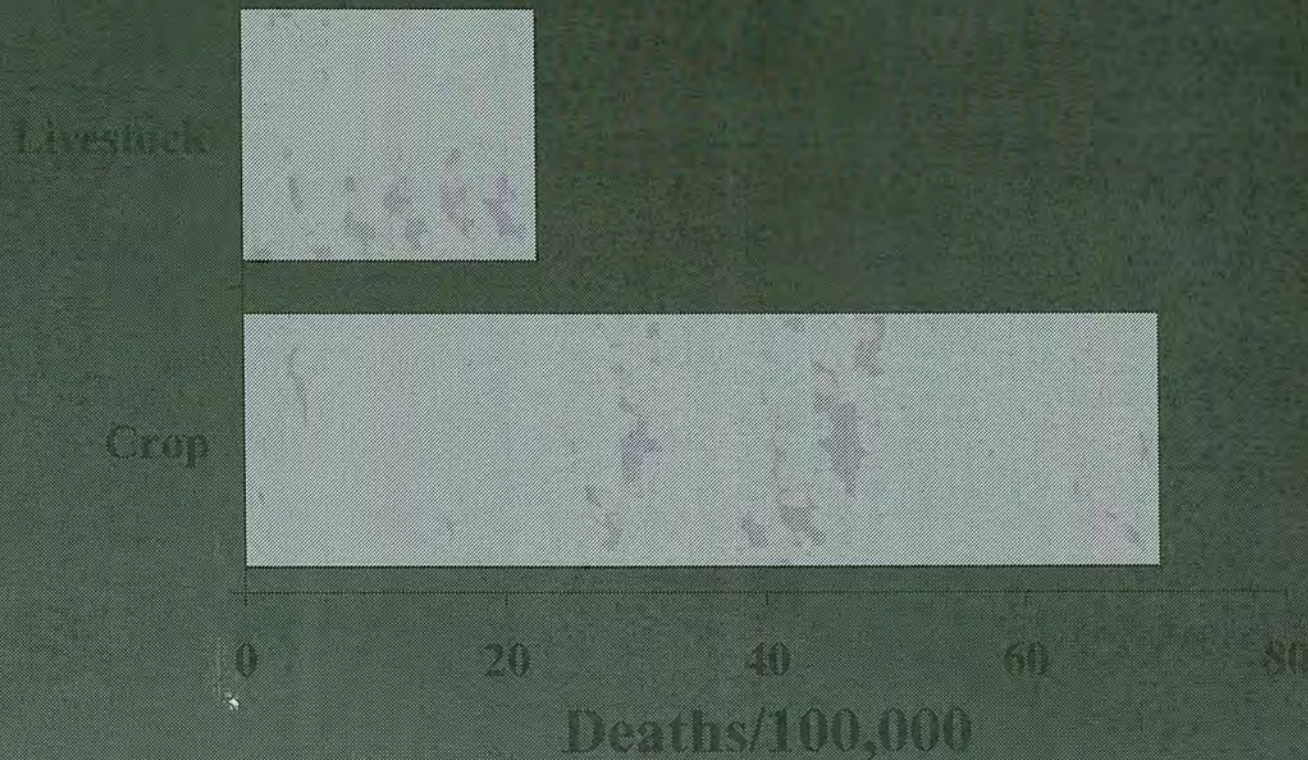


* Excludes New York City.

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Farming fatality rates to workers over 54 years old by type of farm, 1992-2004*



* Excludes New York City. Rates calculated by NIOSH and may differ from BLS.



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Farming fatalities to workers over 54 years old by region of the US, 1992-2004*

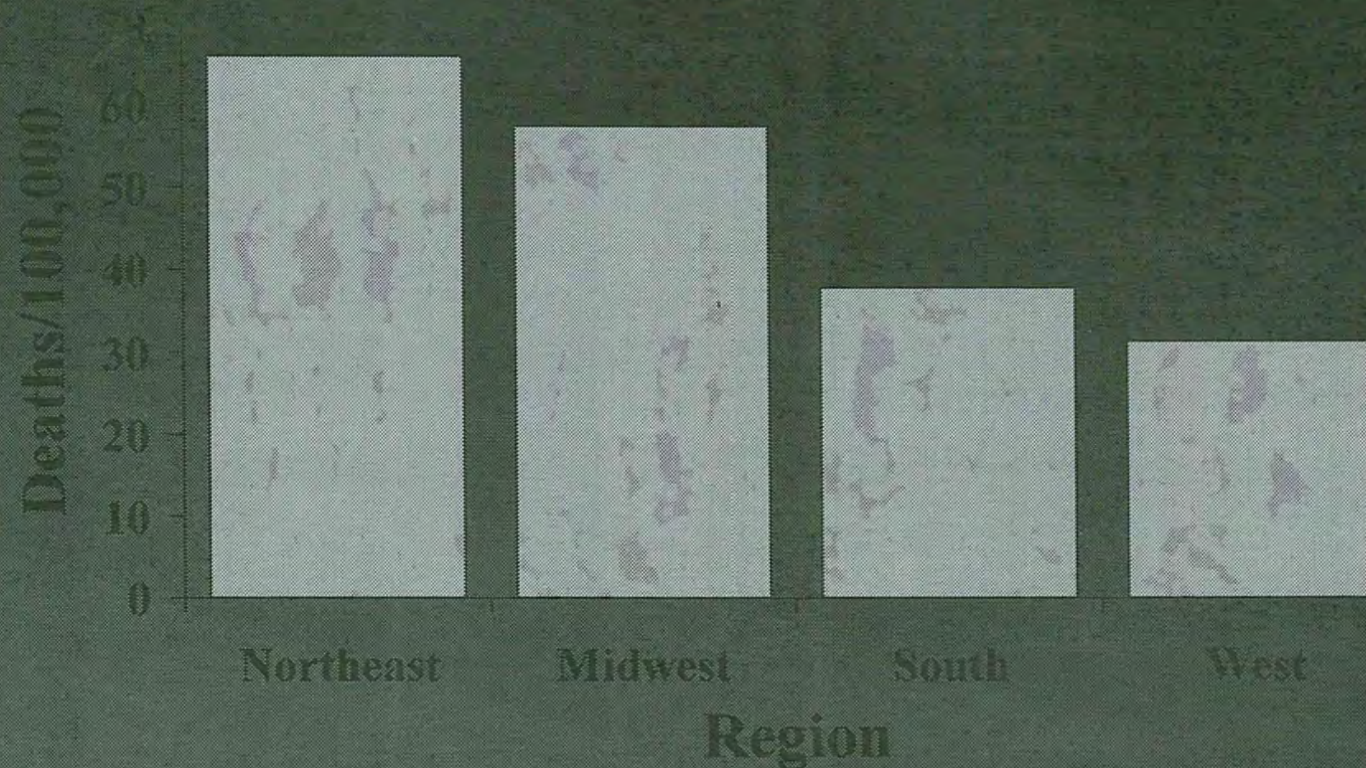


* Excludes New York City.

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Farming fatality rates to workers over 54 years old by region of the US, 1992-2004*



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Leading sources of farming deaths, and the number that occurred to workers, 1992-2004*

Source of Injury	All Deaths:	Deaths: >54
Tractors	2617	1702 (65%)
Trucks	687	272 (40%)
Ag. Harvesters	273	121 (44%)
Ag. Mowers	168	117 (70%)
Animals	323	201 (62%)

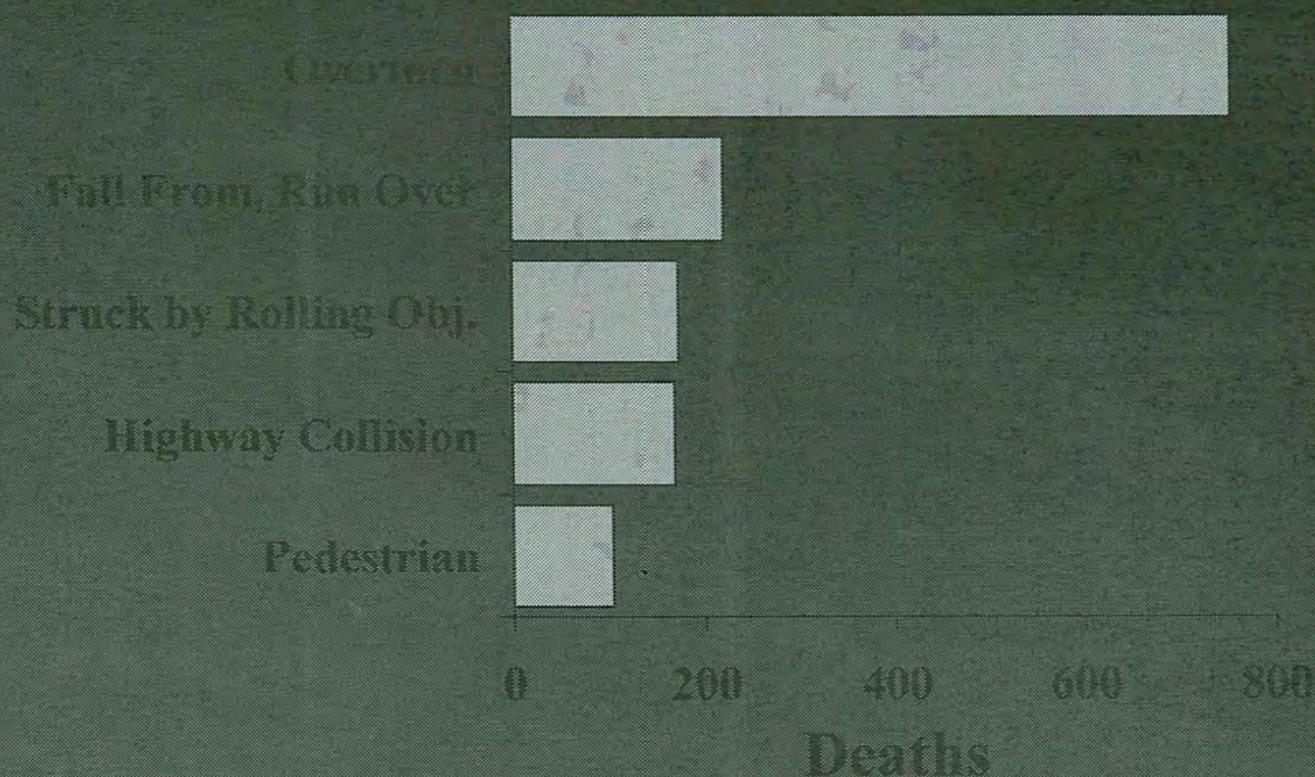


* Excludes New York City.

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Tractor-related deaths for workers over 54 years old by type of injury event, 1992-2004*

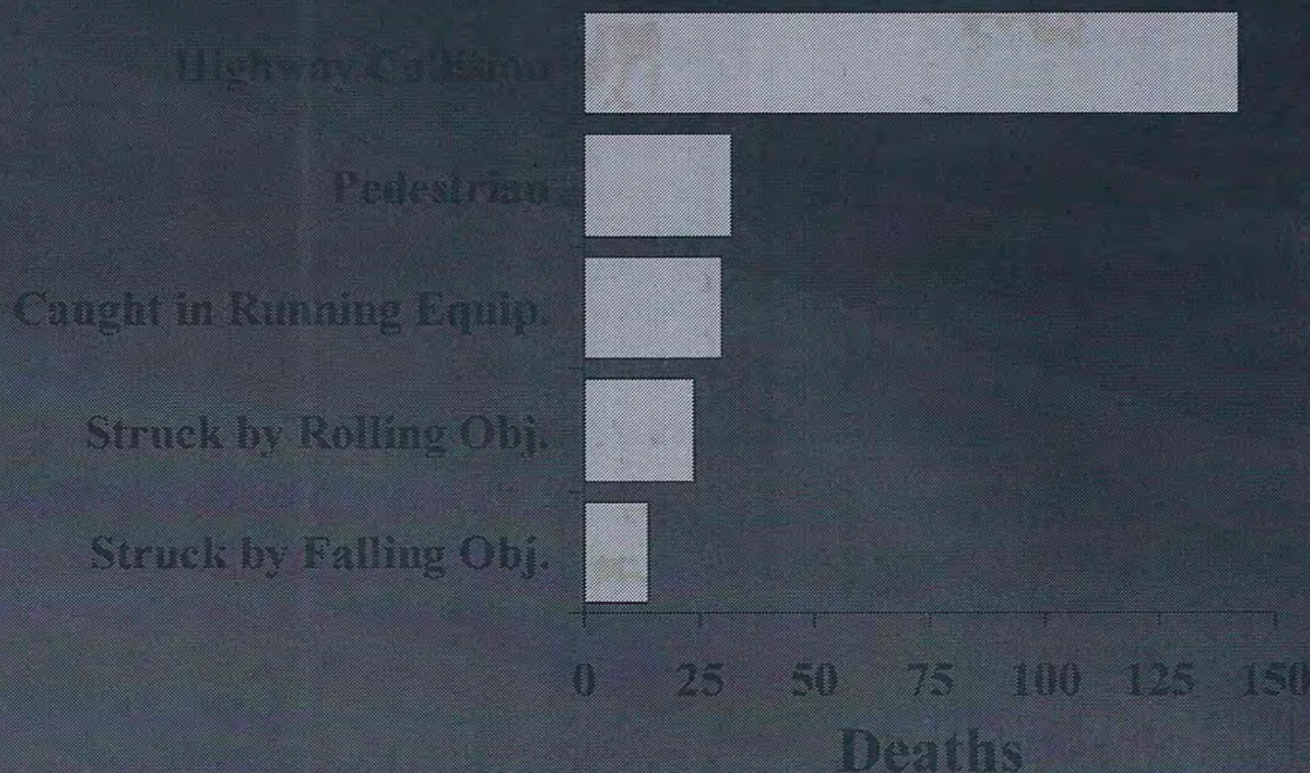


* Excludes New York City.

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Truck-related deaths for workers over 54 years old by type of injury event, 1992-2004*

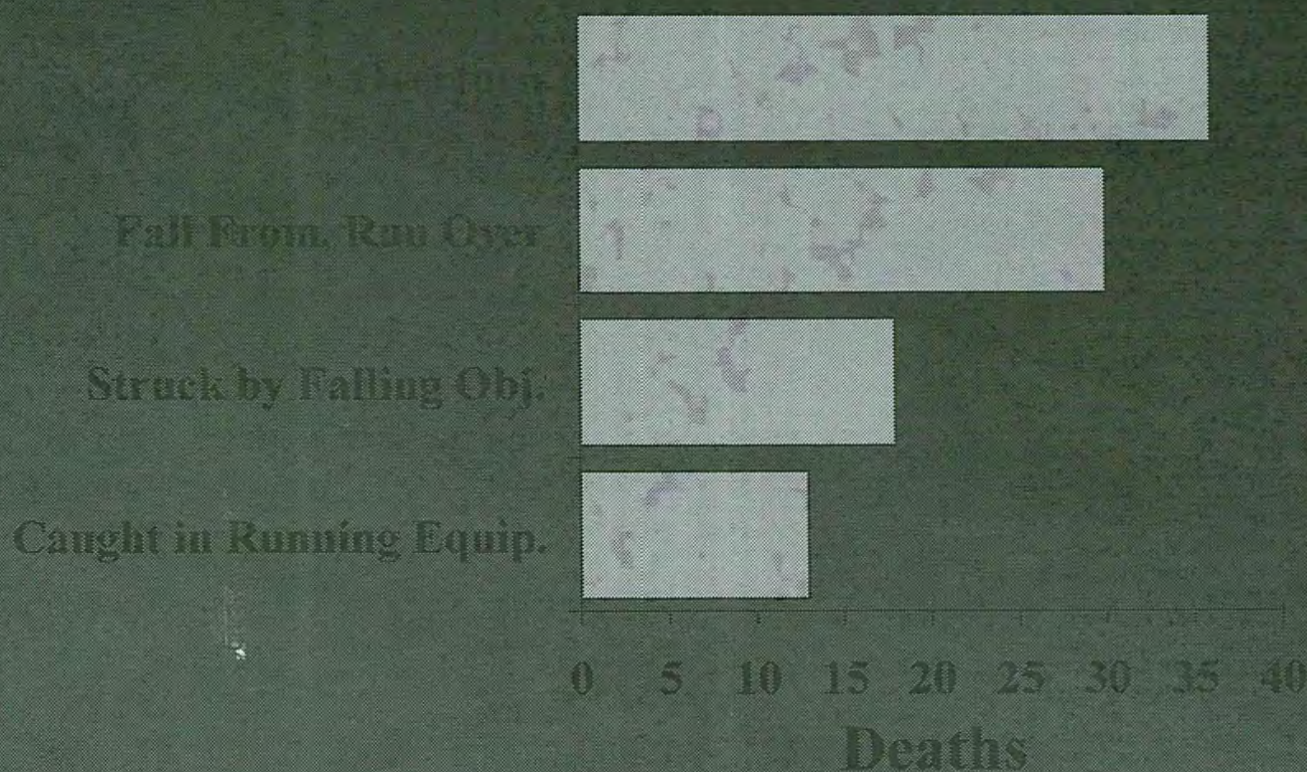


* Excludes New York City.

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Mower-related deaths for workers over 54 years old by type of injury event, 1992-2004*

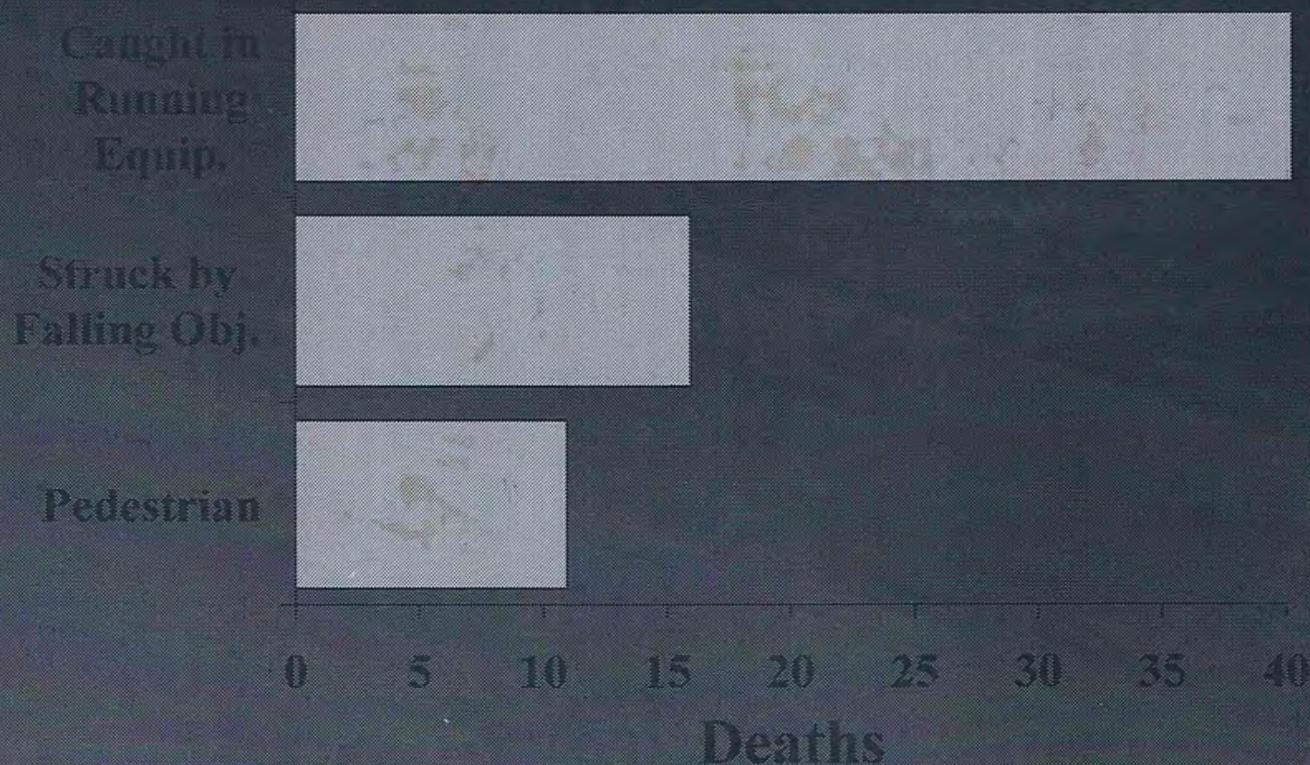


* Excludes New York City

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Harvesting machine-related deaths for over 54 years old workers by type of injury event, 1992-2004*



* Excludes New York City

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FACE Investigations

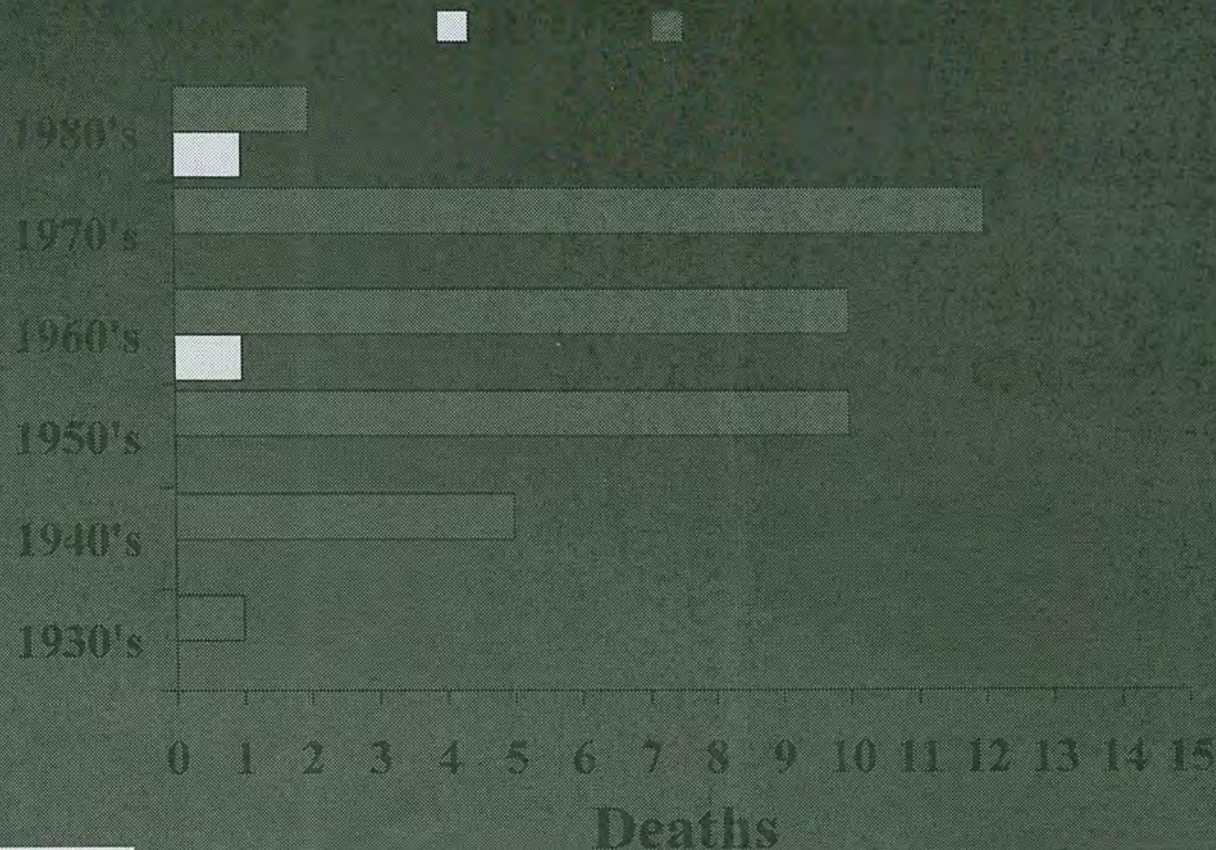
- 91 tractor overturn death investigations between 1991 and 2003
- Investigations scattered across 16 states.
- 44 involved workers over 54 years old.
- 42 had information on the model year of the tractor and whether a ROPS was present.



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Model year of tractors involved in 42 overturn death investigations to workers over 54 years old, 1991-2004



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Summary



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Summary

- The farming workforce continues to age. The percentage of the workforce over 54 years old increased from 27% to 33% between 1992 and 2004.



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Summary

- The non-fatal farming injury rate for workers over 54 years old is similar to the injury rate for workers 20-54 years old.
- The average number of days lost to injury and the length of hospital stays are higher for older farm workers compared to workers 20-54 years of age.

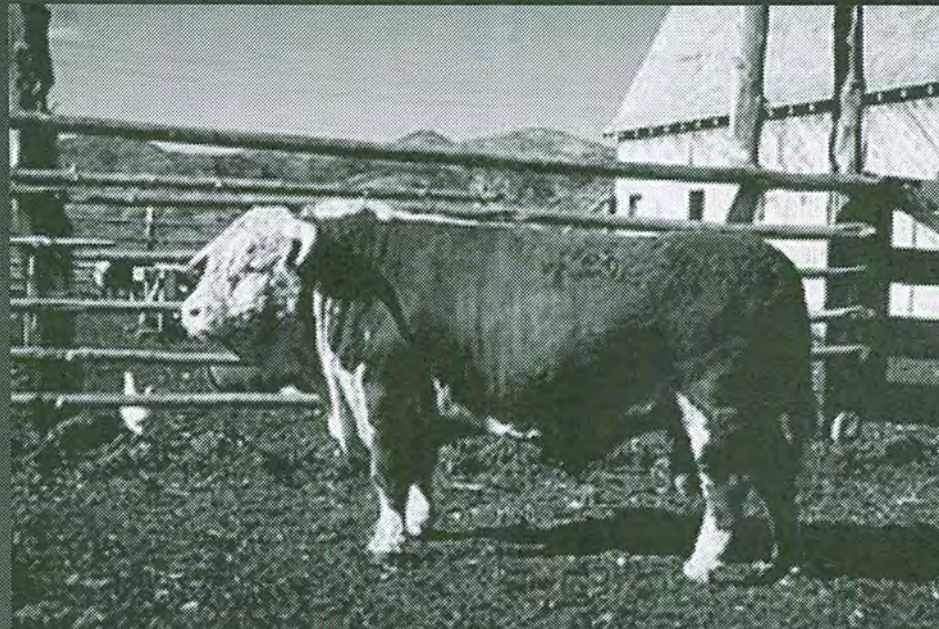


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Summary

- Non-fatal injuries to older workers were highest in number and rate on livestock operations.



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Summary

- Falls (from the same level and from an elevation), being struck by swinging or hand held objects, and assaults by animals were the most common type of injury event for older farm workers.
- Working surfaces, hand tools, and cattle were the most common sources of injury for these same workers.



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Summary

- Farm workers over 54 years old account for the 52% of the farming deaths, but are only 29% of the farming workforce.
- Farm workers over 54 years old have fatality rates over twice that of farm workers less than 55 years of age.



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Summary

- Fatal injuries to older workers were highest in number and rate on crop operations.



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Summary

- Farm workers over 54 years old dominate the leading causes of death among all farm workers:
 - Tractors – 65%
 - Trucks – 40%
 - Animals – 62%
 - Harvesting Machines – 44%
 - Mowing machines – 70%



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Summary

- Tractor overturns are the most common cause of death for these older workers, followed by tractor run-over, and tractor highway collisions.



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Targets for Intervention

- Falls to working surface
- Struck by hand tools
- Assaults by cattle
- Tractor overturns



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Questions?



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