

Summary Report: Agriculture-, Forestry-, and Fishing-Related Fatalities in Florida for 2020¹

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Introduction

Agriculture, Forestry, and Fishing (AgFF) is one of the most hazardous industrial sectors in the United States. According to the US Bureau of Labor Statistics' (BLS) annual Census of Fatal Occupational Injuries (CFOI) data, the work-related fatality rate was 23.1 deaths per 100,000 full-time workers in AgFF, compared to a rate of 3.5 deaths per 100,000 full-time workers for all industries (total) (BLS 2020). Agricultural operations are not just hazardous for the workers, but also for the non-workers such as family members, visitors, and other drivers sharing the same roads with farm equipment. Injuries sustained by non-workers usually are not captured by the traditional injury surveillance methods.

The purpose of this report is to summarize Florida's AgFF-related fatalities for 2020. This report helps to identify hazards and risks associated with agriculture, forestry, and fishing. The information from this report may be used by Extension educators, researchers, agricultural employers, and anyone interested in injury surveillance for their outreach safety training programs and determining the research priority areas.

Method

The data used in this report were from news clippings, obituaries, and death certificates. The death certificates were obtained from the Bureau of Vital Statistics at the Florida

Department of Health (DOH). Fatalities included in this report are:

- Accidents
- Accidental drug overdoses (if the place of injury was worksite)
- Workplace homicides
- Workplace suicides

The BLS's Occupational Injury and Illness Classification System (OIICS) (BLS 2012) was utilized to classify each fatality according to the primary source of injury, secondary source of injury, and the event or exposure associated with the injury. The primary source of injury or illness identifies the object, substance, bodily motion, or exposure that directly produced or inflicted the injury. The secondary source of injury identifies the object, substance, or person that generated the source of injury or contributed to the event or exposure. The event or exposure describes the manner in which the injury or illness was produced or inflicted by the source of injury or illness. In this report, only primary injury sources are shown.

Results

There were 33 fatalities recorded in Florida in 2020 (24 agricultural, three forestry-related, and six fishing-related). Table 1 lists the summary characteristics of the fatalities and demographics of the victims.

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Types of Fatalities

The Farm and Agricultural Injury Classification (FAIC) coding scheme (ASAE S575.3) is used to separate occupational work-related incidents (ASABE 2020). FAIC codes allow identification of work cases as well as unique situational exposures in production agriculture, such as non-workers in work environments. In many cases, there was not enough detailed information to make the code assignment; for those cases, we used the “Undeterminable” category (e.g., A roadway crash involving a tractor and injuring the tractor operator could be coded as “undeterminable” because it was not clear if the operator was traveling for agricultural work at the time of the incident). Additionally, workplace suicides, homicides, and accidental overdoses were classified under the “Undeterminable” category (Table 2).

Injury Event/Exposure and Source Categories

Agricultural Fatalities

Adults aged 65 and older and youth under 18 accounted for 12 of the 24 fatalities (50%). Figure 1 shows the injury sources for agricultural fatalities. Vehicles caused 50% of the injuries. Twelve people were killed in an incident sourced by highway vehicles (n=5), off-road passenger vehicles (n=4), and tractors (n=3). Three victims were killed in incidents caused by horses. Environmental heat killed an additional three victims. One victim was killed in a machinery-related incident.

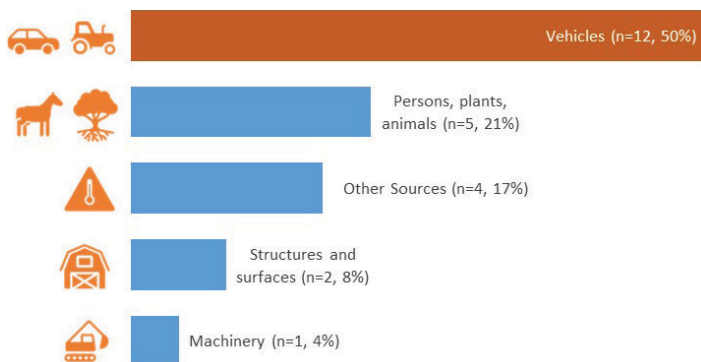


Figure 1. Fatalities by injury source.
Credits: Serap Gorucu, UF/IFAS

The following event/exposure categories contributed to the agricultural fatalities.

- Transportation incidents (n=15, 62.5%)
- Exposure to harmful substances and environments (n=3, 12.5%)
- Contact with objects and equipment (n=3, 12.5%)

- Violence and other injuries by persons or animals (n=2, 8.3%)
- Falls, slips, trips (n=1, 4.2%)

Almost half of the transportation incidents were non-roadway incidents (Figure 2). The injury sources of these non-roadway incidents were all-terrain vehicles and tractors. Roadway incidents involved highway vehicles and tractors. There were two pedestrians (bystanders) and two horse riders killed on farms.

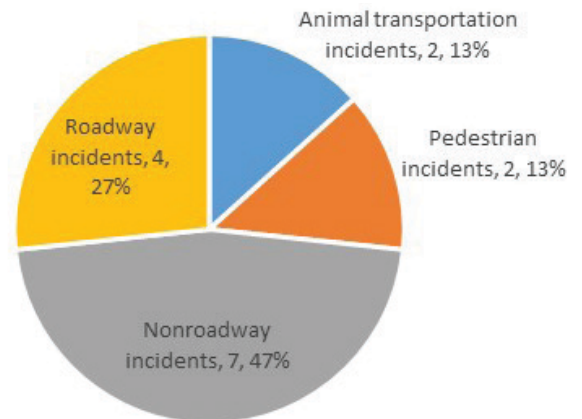


Figure 2. Transportation incidents.
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The “exposure to harmful substances or environment” category accounted for three fatalities. These three victims were exposed to environmental heat while working in the field or worksite. Three additional victims were killed in incidents because of a falling tree, a collapsing wall, and being crushed under corn.

Forestry- and Logging-Related Fatalities

We identified three forestry-related fatalities in 2020, all of which involved transportation incidents. The injury sources for these fatalities were all-terrain vehicles and logging trucks. Two pedestrians were killed in two separate logging truck-related roadway incidents.

Fishing-Related Fatalities

In 2020, six victims were killed in fishing-related incidents. Four of these victims had a drug/alcohol overdose while either working or on-board. One victim was killed in a commercial fishing vessel incident. The other victim was killed by lightning.

Summary and Recommendations

These findings indicate that there is a wide range of causes for AgFF fatalities in Florida. These fatalities did not just involve workers, but also non-workers such as family members, visitors, and people on roadways. Consult the list

below for a few recommendations and resources to prevent AgFF-related fatalities.

1. Transportation incidents were responsible for more than half of the fatalities. Before using tractors or agricultural vehicles on roadways, operators must check the lighting and marking features of their vehicle and make sure all of them are working. A factsheet on safety tips for agricultural vehicles on public roads is available from the Southeastern Coastal Center for Agricultural Health and Safety (SCCAHS) website (<http://www.sccahs.org>).
2. Tractors and off-road vehicles were the two main sources of the non-roadway transportation incidents. Tractor operators must wear seat belts if tractors are equipped with rollover protective structures (ROPS). ATV operators must follow the ATV safety rules: always wear a helmet and protective safety gear, never ride on paved roads, and never ride under the influence of alcohol and drugs. For more ATV safety rules, consult the ATV Safety Institute (<https://atvsafety.org/>).
3. To prevent heat stress-related injuries, employers should follow the recommendations from the National Institute for Occupational Safety and Health (NIOSH) (<https://www.cdc.gov/niosh/topics/heatstress/recommendations.html>) and the Occupational Safety and Health Administration (OSHA) (<https://www.osha.gov/heat-exposure/prevention>).
4. Mental health- and opioid use-related training sources and links are available through the Southeastern Coastal Center for Agricultural Health and Safety (SCCAHS) (<http://www.sccahs.org/index.php/ag-health-safety-topics/opioid-abuse/>).

References

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Table 1. Summary characteristics of fatalities in Florida in 2020.

Variables		Agriculture (n=24)	Forestry(n=3)	Fishing(n=6)
Manner of death	Accident	23 (96%)	3 (100%)	2 (33%)
Accidental overdose	-	-	3 (50%)	
Homicide	-	-	1 (17%)	
Suicide	1 (4%)	-	-	
Age	Under 18	4 (17%)	-	-
	18–64	11 (46%)	2 (67%)	6 (100%)
	65 and older	8 (33%)	-	-
	Unknown	1 (4%)	1 (33%)	-
Gender	Female	4 (17%)	-	-
	Male	20 (83%)	3 (100%)	6 (100%)
Hispanic origin	Hispanic	6 (25%)	-	1 (17%)
	Others*	18 (75%)	3 (100%)	5 (83%)

*"Others" also include unknowns.

Table 2. Fatalities by Farm and Agricultural Injury Classification (FAIC) in Florida in 2020.

FAIC Category	Agriculture (n=24)	Forestry (n=3)	Fishing (n=6)
Occupational work-related	9 (38%)	-	2 (33%)
Hazards to non-workers	2 (8%)	-	-
Roadway collision	3 (13%)	2 (67%)	-
Undeterminable	10 (42%)	1 (33%)	4 (67%)