

Purdue University

Agricultural Safety and Health Program

2002 Indiana Farm Fatality Summary

Compiled by the Purdue University Agricultural Safety and Health Program

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The 2002 Indiana farm fatality report was compiled by Purdue's Agricultural Safety and Health Program through a variety of sources, including two separate news clipping services, voluntary reporting from Extension educators, county coroners, individuals, and personal interviews. No cases were identified using official death certificates due to the lack of access to these records at the Indiana Department of Health.

The report includes a summary of 19 farm work-related fatalities¹ that occurred in 2002. This is a decrease from the 22 fatalities reported in 2001, and only three more than in 1998, the year that the lowest number of fatalities were recorded since Purdue began keeping records in the 1940's. For over 30 years there has been a steady downward trend in the number of farm work-related fatalities. With an 16.6% decrease in the number of documented fatalities as compared to last year, the trend in the frequency of deaths continues to go down.

The average age for farm work-related fatality victims in 2002 was about 53; the same as the average age over the past eight years. All but one documented case involved males. Two (10.5%) of the fatalities identified involved a child or adolescent under the age of 18. This is one more than the previous year and two more than 1998 when no child or adolescent fatalities were identified.

Incidents involving tractors accounted for 52.6% percent of the recorded fatalities (Figure 1). This is less than the 59% recorded in 2000 and 2001 and lower than some years in the past when over 75% involved tractors. Tractor roll-overs were the leading type of fatal farm-related incidents in the state accounting for 38.9% of all identified fatalities. (Roll-overs continue to be the leading cause of farm work-related fatalities nationally accounting for approximately 25% of all fatalities.) When tractor-related cases are combined with roadway collision cases involving vehicles colliding with tractors and machinery, the cases account for almost 72% of all reported fatalities.

¹ A **farm work-related fatality** is defined as any fatal injury to a farm or ranch worker (or bystander) occurring in the course of performing an agricultural work-related task, or as a result of exposure to hazards in the agricultural workplace. Motor vehicle incidents not clearly involving agricultural equipment are excluded.

	Age Distribution						
Gender	1-17	18-35	36-59	60+	Unkown	Total	%
Males	2	1	6	9	-	18	94.7
Females	-	-	1	-	-	1	5.3
Total	2	1	7	9	-	19	100
%	10.5	5.3	36.8	47.4	-	100	
Average Age	10	24	44	73	-	53	

Table 1. Age distribution of Indiana farm work-related fatalities in 2002.

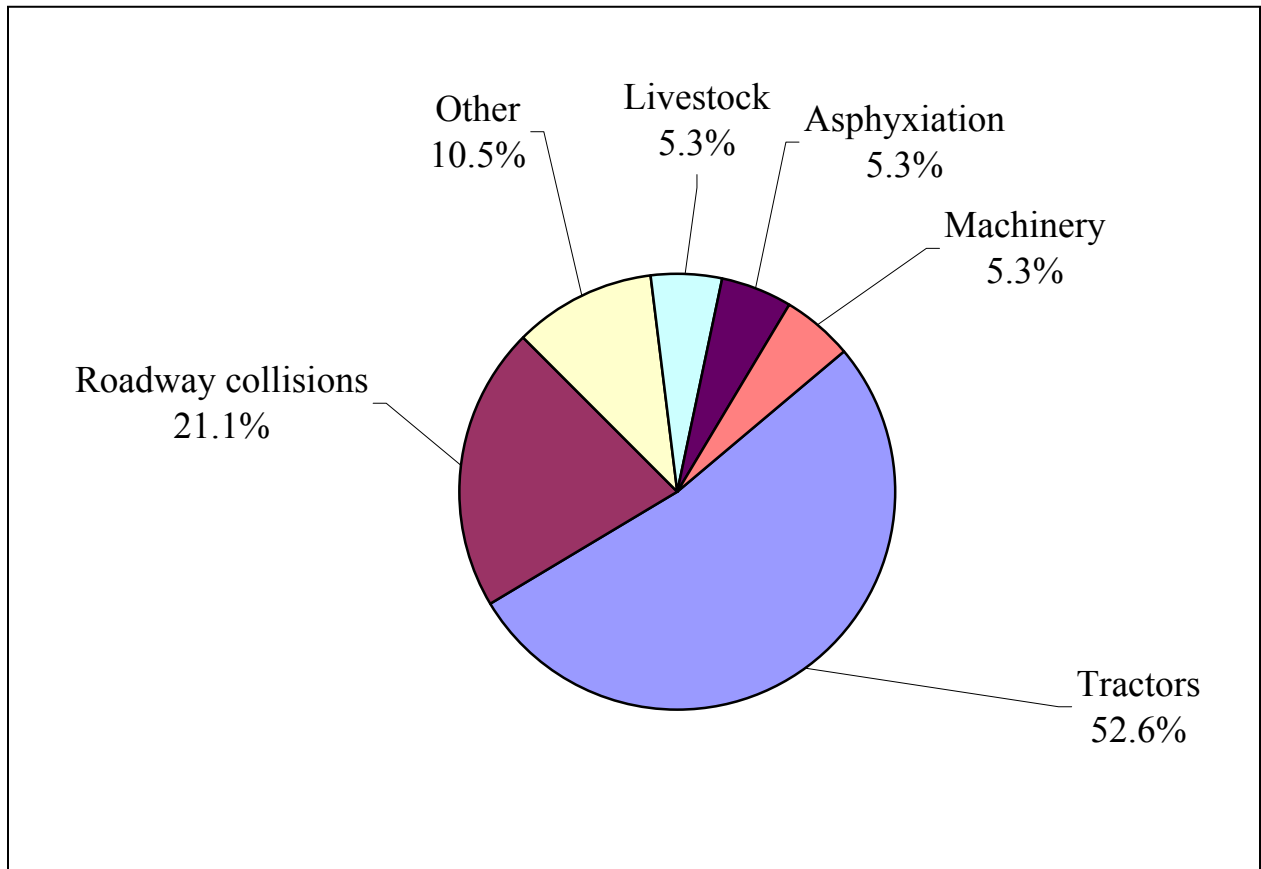


Figure 1. Distribution of 2002 Indiana farm work-related fatalities by general type of incidents.

Table 2 summarizes the specific types of incidents associated with Indiana’s farm fatalities in 2002. Several types of fatalities that have been historically common to Indiana agriculture did not occur during the year, or none were identified, including those associated with PTO entanglements and flowing grain entrapment.

Type of Incident		Fatalities
Entrapments or suffocations	Grain entrapments	-
	Gas asphyxiation (manure pit)	1
Falls	From farm structures	-
	While on ground	-
Livestock-related incidents	Horse-drawn wagon incidents	1
	Kicked by horse	-
	Attacked by bull	-
Machinery-related incidents	PTO entanglements	-
	Other entanglements	-
	Crushings/pinnings	1
	Runovers	-
	Electrocution	-
Tractor-related incidents	Roll-overs	7
	Runovers	-
	Crushings/pinnings	3
	Struck by front-end loader	-
Roadway collisions	With tractor	-
	With pull-behind machinery	3
	Grain truck	1
Other incidents	Struck by wagon	1
	Explosion	1
Total		19

Table 2. 2002 Indiana farm work-related fatalities by specific type of incidents.

Table 3 provides a more detailed listing of fatalities occurring in Indiana counties in 2002. Fatal farm work-related incidents are described here by (1) date of incident, (2) county of report, (3) age of victim, (4) gender of victim, (5) description of circumstances surrounding the incident, and (6) Farm and Agricultural Injury Classification (FAIC) Code. The FAIC code is used to facilitate consistent and accurate classification of farm and agriculture-related injuries. Additional information on the FAIC code is available from the American Society of Agricultural Engineers² or by contacting Purdue's Extension Safety Specialist.

The FAIC code system:

- parallels, to the extent appropriate, current nationally established methods for classifying and assigning work-related injury cases to an industry;
- provides a systematic scheme for separating farm production work cases from non-farm-production work cases; and
- permits the identification of cases that uniquely reflect the situational exposures predominate to the agricultural industry.

² ASAE Standard S575.1, 2002. ASAE, 2950 Niles Road, St. Joseph, MI 49085. Tel: 616-429-0300

	Date	County	Age	Sex	Description of incident	FAIC
1	5-Jan-02	Spencer	24	M	Explosion of oil well remains while using tractor to dump hot coals.	6 ³
2	12-Jan-02	Jasper	44	M	Auger fell on victim.	1 ⁴
3	9-April-02	Jennings	36	F	Victim collided into an oncoming pull-behind farm machine on roadway.	9 ⁵
4	18-April-02	Parke	15	M	Cart driven by six horses flipped.	1
5	19-April-02	Harrison	75	M	Tractor and wagon began to roll. Victim was struck by wagon.	1
6	28-April-02	Jefferson	45	M	Pinned by a tractor being worked on.	1
7	23-May-02	Grant	80	M	Pinned by a garden tractor being worked on.	-
8	30-May-02	Johnson	39	M	Motorcycle collided into the rear of a farm tractor pulling machinery.	9
9	9-June-02	Decatur	42	M	Tractor roll-over while trying to free it from the mud.	1
10	11-June-02	Miami	4	M	Fell into liquid manure storage pit.	7 ⁶
11	25-June-02	Kosciusko	71	M	Tractor roll-over while trying to free it from the mud.	1
12	30-July-02	Jefferson	69	M	Tractor roll-over.	6
13	9-Sept-02	Morgan	64	M	Tractor roll-over.	6
14	12-Sept-02	Morgan	49	M	Tractor roll-over while pulling a log.	6
15	17-Sept-02	Delaware	64	M	Tractor roll-over while trying to remove a tree.	6
16	24-Sept-02	Morgan	56	M	Tractor roll-over while pulling a log.	6
17	6-Oct-02	Hamilton	82	M	Pinned by a tractor.	-
18	7-Nov-02	Clinton	80	M	Roadway collision into the back of a disk.	9
19	18-Nov-02	Tippeconoe	68	M	Drove grain truck into the path of a dump truck at an intersection.	1

Table 3. Listing of 2002 Indiana farm work-related fatalities.

Figure 2 represents a geographic distribution of Indiana's documented farm-related fatalities in 2002. Morgan county had three fatalities in September all involving tractor roll-overs. Figure 3 represents a geographic distribution of 628 of Indiana's 715 documented farm-related fatalities in the years 1980 through 2002. The four counties with the most identified fatalities over the past 23 years were Elkhart with 20, LaGrange with 18, and Greene and Dubois with 15.

³ FAIC-6 Farm hazard exposure, non-workers: equipment, tools, objects, and products.

⁴ FAIC-1 Farm production work.

⁵ FAIC-9 Farm hazard exposure, roadway collision.

⁶ FAIC-7 Farm hazard exposure, non-workers: structures and landscape.

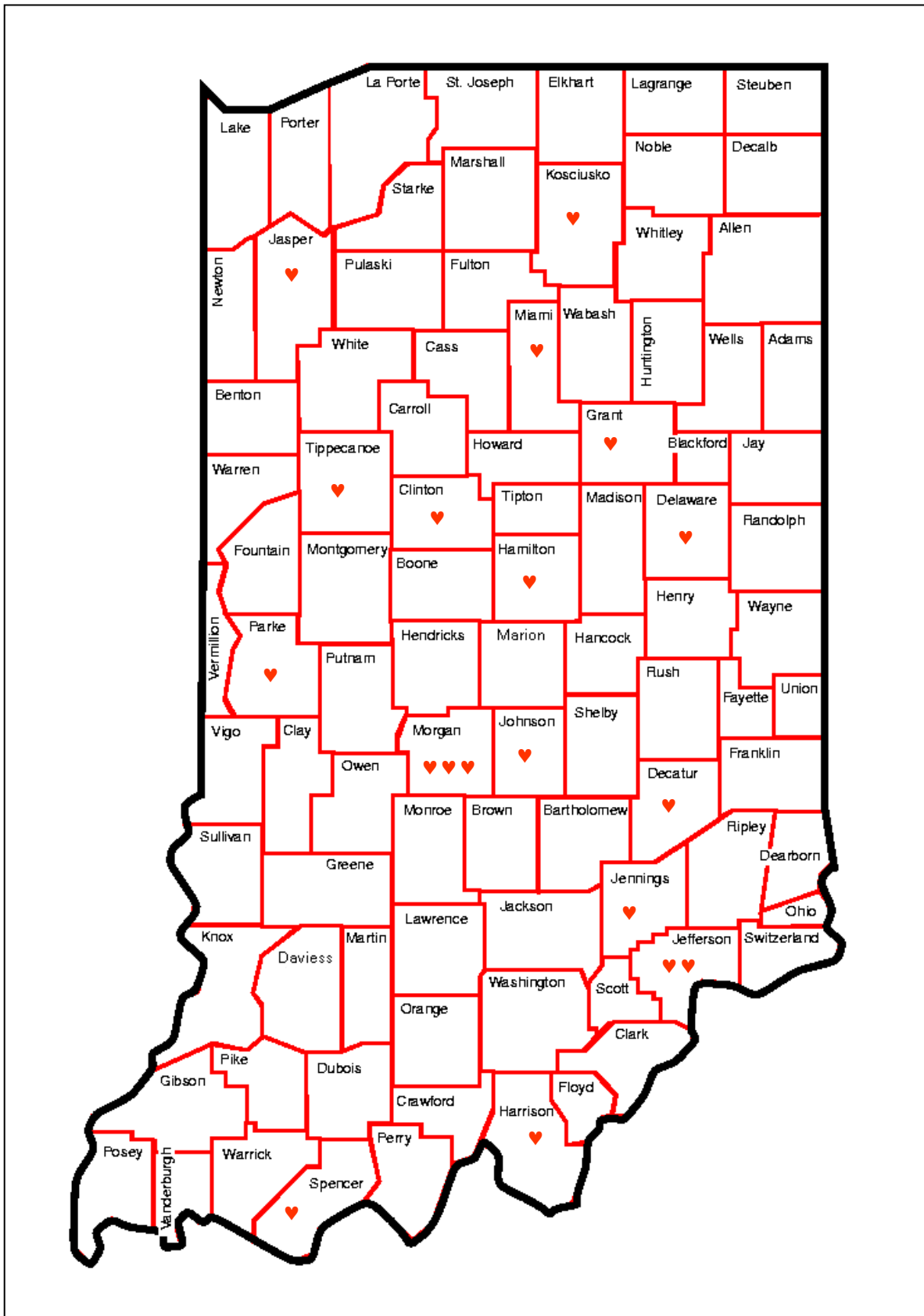


Figure 2. Geographic distribution of 2002 Indiana farm work-related fatalities.

Figure 4 presents a trend of identified farm-related fatalities over the past 34 years. It is believed that 1998 recorded the lowest number of fatalities of any year since Purdue’s Agricultural Safety and Health Program has been keeping records. Through 1999 and 2000, identified fatalities increased but the trend continued to be decreasing. Fatalities again decreased in 2001 and then in 2002.

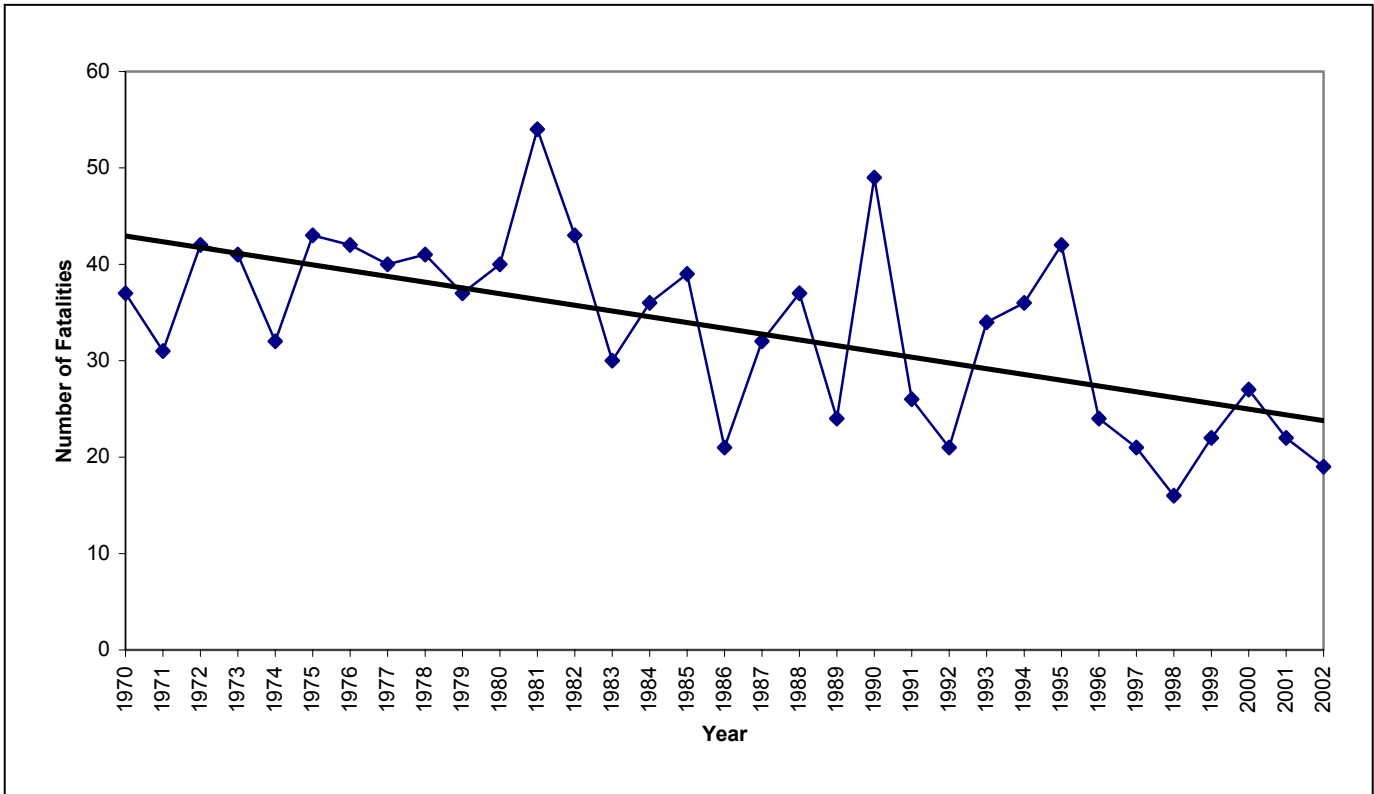


Figure 4. Annual summary of farm work-related fatalities.

Using the estimate of 58,000 productive farms in Indiana with a sales of over \$1,000 and the estimated population of 80,400 who operate or earn a wage employed on a farm in Indiana, it was estimated for 2002 that 1 out of every 3222 farms experienced a farm-related fatality and the death rate was approximately 22.4 per 100,000 farm employees. The rate compares to an estimated national death rate of 3.9 per 100,000 for workers in all industries and 21.3 per 100,000 for those engaged in agricultural production.⁷ It is believed, however, that the Indiana rate would be lower if unpaid family labor was included in the population of those exposed to farm hazards on a regular basis. Furthermore, the National Safety Council data does not include children under 16 in their calculation of rates while Purdue Agricultural Safety and Health does if the children were involved with or exposed to farm work activities.

⁷ The **estimated death rates** of 3.9 per 100,000 workers in all industries and 21.3 per 100,000 workers in agricultural production come from the National Safety Council Injury Facts, 2002 ed.

Summary of Reported Fatalities not Included in the Farm Fatality Report

Several of the fatalities that were reported by the clipping services in 2002 were not included in the Indiana farm fatality report because they were determined to be non-farm cases. Four cases included three males, ages ranging from 59 to 88 and one female, age 58. Of the four incidents, two cases involved lawn tractor overturns, one was a car collision with a county mowing tractor, and the other case was caused by a crushing injury from a fallen utility trailer.

Also reported by the clipping service were two Michigan cases involving Indiana residents. In one case, a man, 49, was runover by a hay wagon. In the other case, an Indiana family, three males, 1, 4, and 30, and two females, 31 and 56, was killed in a Michigan farm-house explosion.

Another fatality that was reported by a county extension agent was a roadway collision involving farm machinery. An implement dealer was hauling a piece of farm machinery when a man in the oncoming lane hit the machinery.

Summary of Indiana's Farm-related Injuries and their Economic Impact

Farm-related injuries are not comprehensively documented by any source in the state. Therefore, there is little data on the number and frequency of injuries occurring during farm work. However, many of Indiana's farm-related injuries that were identified through clipping services in 2002 were severe. The incidents reported included tractor overturns, being crushed under large hay bales, being pinned under collapsing grain augers, grain auger entanglements, explosions, and falls. These incidents resulted in severe injuries such as hand and leg amputation, skull and other bone fractures, internal injuries, severe burns, and permanent spinal cord injuries. Two of the victims were females and ages of all recorded victims ranged from 8 to 71.

It is estimated, based upon prior research, that approximately 1 out of every 9 farms annually experiences a farm-related injury requiring medical attention. Based upon the estimated 58,000 farms in the state, it can be projected that in 2002 there were approximately 6,400 treated injuries. Prior research by the National Safety Council suggests that 2% of reported farm injuries result in permanent disabilities which indicates that approximately 130 such cases occurred in the state in 2002.

To gain a perspective of the potential economic impact of farm injuries to the state, a conservative estimated medical cost of \$1,000 per injury would result in an economic loss of \$6.4 million excluding the costs of transportation to receive medical services, replacement labor, property damage, emergency services, and long-term rehabilitation services. This estimated total, however, would be substantially increased if the cost associated with the 19 fatalities and the 130 permanent disabilities were included. For example, the estimated cost of medical and rehabilitation care for a person experiencing a permanent spinal cord injury now exceeds \$1 million. At least two of these were reported during 2002.

For additional information on agricultural safety and health resources, call 765-494-1191 or go to www.farmsafety.org on the web.