

Prevention at Work

Farming-Related Deaths, Oklahoma, 1998-2008

General Information

Farming is one of the most hazardous industries in the United States. In 2008, 456 farmers and farm workers died due to a farm-related injury. From January 1998 to December 2008, 195 people were killed in farming related incidents in Oklahoma. Farming-related deaths accounted for 16% of all work-related deaths in Oklahoma during this time period. More than half of all farm-related deaths involved a tractor, and 20% of deaths involved a tractor rollover. Nearly all (95%) deaths occurred among males. The age of workers killed ranged from 16 to 91, with a median age of 66. Injuries were most common in the months of May and July. The smallest number of fatal injuries occurred in January and December. More than half of all fatal injuries occurred between 10:00 AM and 8:00 PM, with the most occurring from 3:00-4:00 PM. The largest number of fatal injuries occurred in Choctaw, Garfield, Grady, and McIntosh Counties, with seven fatalities each.

Traffic Crashes

- A 68-year-old male was driving a truck pulling a trailer loaded with cattle when an oncoming vehicle went left of center and struck the truck almost head-on. The truck left the roadway, went into a ditch, and caught fire. The driver was pinned in the truck. [Six other men (ages 27, 31, 46, 55, 57, and 66) were fatally injured after being involved in farming-related motor vehicle crashes.]
- A 74-year-old male was pulling a fertilizer spreader using his pickup. He had just gotten fertilizer and was driving across a rural rail crossing with signs but no barricades or lights when he was struck by a train. The driver did not hear the train whistles because he was hard of hearing.
- A 47-year-old male was attempting to herd a stray cow from the road when a truck came around the corner, struck the cow, and lost control. The truck exited the roadway over a guardrail and struck the man. [One other male pedestrian (age 18) was fatally injured after being struck by a motor vehicle.]
- A 52-year-old male was driving a tractor on a two-lane road and was struck from behind by a one-ton truck. The tractor ran off the road and overturned, pinning the driver. The tractor was not equipped with tail lights or a slow-moving vehicle placard. [Three other men (ages 66, 77, and 83) were hit by a motor vehicle while operating a tractor.]
- A 22-year-old male was driving a wheat truck and attempted to make a left turn at high speed when the wheat inside the trailer shifted, causing the tractor trailer rig to roll. He was not wearing a seat belt and was partially thrown out of the cab. [Three other men (ages 73, 76, and 80) were fatally injured after single vehicle crashes while driving trucks and tractors.]

Injured by Farm Animal

- An 80-year-old male was attempting to let a cow and calf through a gate on his ranch when the cow charged him, knocked him to the ground, and stepped on him numerous times. The cow weighed approximately 900 pounds. [Three other men (ages 57, 67, and 69) and one woman (age 85) were fatally injured after being trampled by farm animals.]
- A 62-year-old female was moving cattle weighing approximately 600 pounds each from one corral to another. Two calves that were always together were separated. While trying to close a 15-foot long metal gate, one of the calves crashed through the swinging gate and caused her to be thrown into a pole.
- A 61-year-old male was working with his cattle. There was a cow in the cattle chute and it overturned, pinning him to the ground.
- A 66-year-old male was attempting to put a cow and calf in a pen on his ranch, but the cow became aggressive protecting her calf and most likely kicked the rancher in the face and chest. [Five other men (ages 35, 65, 67, 67, and 69) were also fatally injured after being kicked or struck by a farm animal.]

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- A 44-year-old male was a horseman working cattle in a remote area of a farm. He became entangled in a rope, causing him to fall from the horse.
[Two other men (ages 26 and 65) and one woman (age 63) were fatally injured after falls from horses.]
- A 54-year-old male was riding a horse and got tangled in a rope, fell from the horse, was pulled into a pond, and drowned while attempting to reach a cow.
[One other man (age 74) was fatally injured after getting caught in rope, pulled into a pond, and drowning.]

Tractor Jump Start or Sudden Start after Being Left in Gear

- An 81-year-old male was helping his grandson weld a hay stinger onto the back of a tractor. He was seated between the barn and a back wheel of the tractor. His grandson turned the tractor on from the ground so the lever could raise the stinger. The tractor was left in gear and it jumped back and pinned him to the barn. The wheel continued to turn and he was flipped out from behind the tractor.
- A 60-year-old male was working on a wheat combine while it was running. The combine jumped into forward gear and ran him over. The combine made a complete circle and ran him over again with the front tires.
[Two other men (ages 56 and 58) were fatally injured while working on tractors that jumped into gear and ran them over.]
- A 51-year-old male was operating a tractor when it died. He got out of the cab and tried to start it by using pliers at the starter. He was standing between the tires when the engine engaged and the tractor leapt forward. The tractor had been left in gear and he was run over.
[Seven other men (ages 35, 62, 67, 68, 69, 84, 91) were fatally injured after jump-starting a tractor and being run over or pinned.]
- A 79-year-old male was brush hogging an area around his residence. He stopped the tractor and got off, leaving it running, and went to check on something when it jumped forward. He was run over by both the tractor and the attached brush hog.
- A 71-year-old male was standing in front of the tire of his tractor while attaching a tractor implement. The motor was running and he unintentionally put the tractor in forward gear to move it backwards and the tire ran over him.

Ejected from or Fell off Tractor and Run Over by Tractor or Implement

- A 65-year-old male was driving a tractor on a gravel road pulling a hay rake down a hill and onto a bridge. The rake was bouncing on its side as it crossed the bridge and hit a tree at the end of the bridge. This bouncing caused the rake to go over the tractor, hit the driver, and knock him off the tractor.
- A 79-year-old male was driving a tractor with an attached brush hog in his pasture when the brush hog raised and the power take-off engaged, causing the blades to turn. He drove into a small ditch, which caused the tractor to tilt to the left. He was ejected, fell under the tractor, and was dragged for a short time before being rolled up under the brush hog.
[Eleven other men (ages 44, 47, 52, 53, 56, 72, 75, 78, 82, 83 and 89) were fatally injured after being run over by a tractor disc, hay baler, or other tractor implement.]
- A 38-year-old male was brush hogging a heavily wooded area on his farm when he was knocked off the tractor seat by a small tree or low branch and was run over by the brush hog.
[Two other men (ages 77 and 88) were fatally injured after being knocked from a tractor by a tree limb and run over by a brush hog.]
[Two other men (ages 39 and 87) were fatally injured after falling off a tractor and being run over.]

Fall from Pickup Bed

- A 16-year-old male was riding in the flatbed of a truck with his right leg hanging off the passenger's side of the bed. He jumped off and his foot was run over by the rear tire, pulling him under the vehicle and causing the rear tire to roll over his head.
- A 43-year-old male was riding in the back of a one-ton flatbed pickup while herding cattle. He fell from the back of the truck and struck his head on the pavement when the driver swerved slightly to herd a calf. The driver was driving approximately five miles per hour.

ATV-related Injuries

- A 22-year-old male ranch worker was riding as a passenger on an ATV to check on cattle. The driver was driving at high speed, hit a large bump, and flipped the ATV.
[Six other men (ages 42, 58, 64, 68, 70, and 85) were fatally injured after an ATV rollover incident.]

Farming-related Deaths, Oklahoma, 1998-2008**Tractor or Other Farm Equipment Rollovers**

- A 52-year-old male was transporting a bulldozer when a drive shaft of his truck broke. The driver pulled to the side of the road to call for help and was driving the bulldozer off the trailer when it slipped off the ramps. The bulldozer rolled onto its side and pinned the driver's chest under the roof frame.
- A 21-year-old male was moving dirt with a tractor equipped with a front-end loader to repair a small farm pond. The tractor overturned and rolled toward the bottom of the pond dam along a 25-30 degree slope and ejected the driver. The tractor was equipped with a roll bar and seat belt, but it is unknown if the seat belt was in use.
[Thirteen other men (ages 20, 47, 53, 56, 59, 63, 63, 66, 70, 72, 73, 78, and 83) were fatally injured after overturning a tractor or other farm equipment while driving up or down an embankment or along the edge of a pond or ravine.]
- A 72-year-old male was using a lightweight tractor to move hay when he may have popped the clutch, causing it to bounce on its front wheels, flip front over back, and pin him between the ground and steering wheel.
[Two other men (ages 55 and 74) were fatally injured after popping the clutch of their tractor, causing it to flip.]
- A 48-year-old male was driving a tractor on an incline. The tractor, which had a large round hay bale on the spike, rolled over and pinned the driver.
[Two other men (ages 20 and 47) were fatally injured after tractor rollovers while carrying hay on a tractor spike.]
- A 76-year-old male was mowing his property on a tractor. He got off the tractor to attach another piece of equipment when the sandbar it was sitting on gave way. The tractor rolled back and pinned him. As he attempted to dig his way out of the sand, the tractor rolled further onto him.
- A 61-year-old male was pulling trees high in the air with a front-end loader attached to a tractor near a pond on a farm. The rear left tire of the tractor slid off the pond dam. As it sank, the tree swung, flipping the tractor one-half times. The driver was pinned between the steering wheel and seat.
- A 44-year-old male was driving an open-cab tractor and pulling two box cars filled with wheat that each weighed 268,000 pounds on a railroad track. The chain connecting the box cars and tractor became entangled in the right

- rear tire of the tractor. The weight of the two box cars caused the tractor to roll over halfway and trap the driver.
- A 39-year-old male was driving a tractor when he veered off the north side of the road. The tractor overturned approximately one-half times and he was pinned under the steering wheel.
[Eight other men (ages 60, 66, 69, 71, 71, 76, 78, and 83) were fatally injured due to tractor rollovers of unknown circumstances.]
- A 68-year-old male was using an oversized brush hog attached to a tractor to clear tall grass away from the edge of a pond. He hit a stump that had a section of chain-link fence wrapped around it. He raised the brush hog, disconnected the power take-off, and put the tractor in reverse to reposition. The tractor also had a low right tire. This tire combined with the oversized brush hog and angle of the soft dirt around the pond caused the tractor to overturn and pin the driver.
[Four other men (ages 60, 66, 68, and 81) were fatally injured after a tractor they were operating hit a tree stump or other object, causing the tractor to overturn.]

Fire/Burn

- A 57-year-old quail and pheasant farm owner was attempting to light a brooder in one of the quail buildings on his farm when an explosion occurred. Two workers, a 31-year-old male and a 54-year-old male were moving quail from a delivery truck to the building and witnessed the explosion. They went into the building and pulled out the unconscious owner. One of the rescuers then went for help. All three men died due to severe burn and smoke inhalation injuries.
- A 70-year-old male was working on a small tractor in a field when a fuel line caught fire. He tried to use a larger tractor to pile dirt on the fire but the larger tractor also caught fire and exploded.
[Three other men (ages 17, 72 and 89) were severely burned after tractor or hay baler repairs resulted in a large fire or explosion.]
- A 69-year-old male was performing a controlled burn at his farm alone. It appeared that a canister filled with a combustible liquid ignited in the back of his pickup.
- A 67-year-old male was filling a propane bottle next to a person who was welding at a wheat field. The welding torch ignited the propane and caused a flash explosion.

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- A 45-year-old male was cleaning out the propane tank of a farm combine using propane. The propane ignited due to an assumed metal-to-metal spark.
- A 32-year-old male was using a tractor attempting to pull tree stumps out of the ground. The tractor had a full tank of diesel fuel. The tractor flipped backwards and pinned him. The tractor then caught fire and he suffered third-degree burns over 71% of his body as well as multiple fractures.
- A 24-year-old male was killed while driving a cotton baler on a farm. A fire ignited in the baler and caused the cotton bales and raw cotton to explode.

Electrocutions

- A 34-year-old male was electrocuted while rigging irrigation equipment at a farm when a pipe touched a 7,500 volt electric line.
[Three other men (ages 21, 42, and 51) were fatally injured after being electrocuted when a pipe or other farm equipment touched a power line.]
- A 73-year-old male was trying to fix a short in a wire in his chicken coop. He somehow came into contact with an exposed end of an electrical wire and was electrocuted.

Airplane Crash

- A 39-year-old male was transporting a crop duster airplane from the point of sale to the purchaser when his airplane was struck by an Air Force training jet.
- A 36-year-old male was going to crop dust when his single-engine plane crashed after takeoff.

Rolled Over by Motor Vehicle or Tractor

- An 87-year-old female rancher went to open a gate behind a one-ton truck while it was backing into a barn. She fell and was backed over by the truck.
- A 75-year-old male was feeding cattle and got out of his truck to close the gate. The truck rolled backwards, trapped his leg, and then rolled onto his head.
[Four other men (ages 51, 72, 87, and 88) were fatally injured after being rolled over by an unmanned truck.]
- A 75-year-old male went to feed cattle and got off his tractor to open the gate. He left the tractor running in neutral on a slight hill and the tractor rolled over him.
[One other male (age 78) was fatally injured after being rolled over by an unmanned tractor.]

- An 80-year-old female was helping her husband chain a cattle chute to a farming tractor when his foot slipped off the clutch. The tractor was in reverse and rolled over her. Her husband fell while trying to get down from the tractor and injured himself. He lay at the scene until the next day when he dragged himself into the house after sustaining severe sunburn and dehydration.
[One man (age 39) was also fatally injured after being unintentionally run over by a backhoe.]
- A 62-year-old male got out of his truck to open the cattle gate at his pasture. The truck rolled forward, became stuck between two fence posts, and he was wedged in the door of the truck. He could not move the vehicle or get out of the door.
- A 17-year-old male fell off the front end of a hay hauler on the curve of a rural road and a tire ran over his head.

Crushed, Pinned, or Struck by Farming-Related Equipment

- A 79-year-old male was brush hogging a pasture at a farm and ran over a piece of barbed wire. He raised the mower with hydraulics on the tractor and supported it with a log. He crawled under the mower to remove the wire with a pair of pliers. The mower fell off the log and trapped him.
- A 58-year-old male was trying to turn over a blown-over corral. The corral rolled back over him, trapping him for a period of time.
- An 84-year-old male was trying to repair a large metal gate in high winds. The gate became dislodged from rollers and fell on top of him with a heavy frame, impacting across his upper chest and causing asphyxiation.
[Three other men (ages 70, 76, and 77) were crushed, pinned, or struck by gate or fencing panels.]
- A 44-year-old male was moving 1,000-pound hay bales with a tractor that had a front-end loader. He had a hay bale raised high above the front of the tractor. While backing up, the front tires hit a dip, causing the front of the tractor to bounce and the hay to bounce off of the front-end loader. It came to rest on the top of the steering wheel and pinned him against the seat. He was pinned for 30 minutes before the bale was removed.
[Five other men (ages 54, 55, 67, 71, 73) were fatally injured after being pinned to a tractor by a hay bale.]

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- A 28-year-old male was operating a dump truck at a chicken farm with the truck bed in a raised position. The bed was stuck and he went under the bed to try and fix it. The bed fell suddenly and pinned him between the truck frame and the bed.
[Four other men (ages 42, 72, 72, and 78) were fatally injured after being pinned and crushed by a hydraulic lift bed.]
- A 51-year-old male was operating a hay baler and trying to free the pickup roller jammed with hay. He tried to clear the jam with his foot while the baler was running. His foot got caught and he was pulled into the baler.
[One other man (age 73) was fatally injured after being pulled into a hay baler.]
- A 72-year-old male was brush hogging his pasture near a fence when he drove under an H-support, pressing himself against the tractor seat and steering wheel. The accelerator was located on the console and he was known to lose clutch control because his feet often became numb. The tractor would not have been able to completely drive under the H-support due to the width of the rear tires.
- A 61-year-old male was working on his farm clearing trees to open a road. He raised the bucket of the tractor to its full height in an attempt to push a tree over. A 15-foot section of the tree fell backwards, hit him in the head, and pinned his chest wall to the steering wheel.
[Two other men (ages 35 and 64) were fatally injured after attempting to remove trees with a tractor.]
- An 84-year-old male was using a tractor and brush hog to mow a pecan orchard. The driver was struck in the chest and head by an overhanging limb and then crashed his tractor into three other trees before stopping.
- A 17-year-old male was transferring a small lagoon at a pig farm. He was operating a valve to release pressure. When he unscrewed the cap a component of the valve broke free and struck him in the head.
- A 35-year-old male was operating a tractor when his shirt became entangled in the drive shaft (or power take-off shaft) of the tractor lead auger, twisting the shirt up around his throat. The shaft released suddenly causing him to hit his head on the corkscrew-digging mechanism.
- A 78-year-old male was changing a tractor tire when it exploded and the tire rim hit him in the face.

- A 78-year-old male was working on a shredder in his farm shop when it fell and pinned him.
[Two other men (ages 56 and 52) were pinned by fallen farm machinery.]

Fall from Tractor (Not Rolled Over)

- A 61-year-old female was operating a tractor equipped with a front-end loader, power take-off, and hydraulic lift with a shank plow attached. She was plowing a level but rough field of native grass that had not been recently mowed or plowed. She actuated the hydraulic lift and raised the plow from the ground while the tractor was still moving in a forward direction. She fell from the tractor seat and struck her head.
[Four men (ages 71, 73, 79, and 85) were fatally injured after falling from a tractor or hay baler.]

Other Tractor-Related Incidents

- An 80-year-old male was operating a tractor while digging a pond when his tractor malfunctioned and the tractor boom pinned him against the outrigger.
- A 56-year-old male was working on a farm creek when his head was crushed between a tractor and trailer.
- A 46-year-old male slid down an embankment in a tractor, went off a bluff, and fell 25 feet. He was pinned underneath the tractor.
- An 87-year-old male was mowing with a tractor pulling a brush hog with a front end loader attached to it. He tried to go between two trees but hit one of them, causing the tractor to come to an abrupt stop and throwing him forward. He impacted the steering wheel and his leg got caught between the side of the tractor and the mount of the front end loader, causing him to hang upside down.

Falls

- An 81-year-old female was found down near her truck after going to check on cattle panels. She was found after dark because of her moans and taken to the hospital with hypothermia and after suffering a possible fall.
- An 81-year-old male slipped and fell on ice while feeding his cattle.
- A 58-year-old male was screwing sheet metal to the top of his barn when he fell between the metal and struck his head on the concrete floor below. The top of the barn was nine feet high.

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- A 71-year-old male was standing on a four-foot hay bale trailer unloading hay bales. He fell off the trailer head first and struck the ground.
- A 63-year-old male suffered a fall while working on barn scaffolding.

Other Farm-Related Incidents

- A 37-year-old female unintentionally injected herself with the medication Dexamethasone. The medication was intended for her pigs.
- A 41-year-old female was cleaning pens in a pig barn and was overcome by carbon monoxide. The barn smelled strongly of ammonia.
- An 84-year-old male was found slumped over the edge of a livestock tank with the upper half of his body submerged for unknown reason and unknown length of time.
- An 81-year-old male went with his wife to feed livestock and brought his shotgun in case any predatory animals attacked the livestock. His wife heard a gunshot and found him with a gunshot wound to the chest. He was not known to be depressed and had just completed a long period of treatment for cancer with a good prognosis.
- A 32-year-old male was working on a 16-foot tall by 8-foot diameter grain elevator when the grain spilled out the bottom and crushed him. He was lying on his back under the clogged feed bin cleaning it when the incident occurred.

Resources

www.swagcenter.org
www.necasag.org
www.nasdonline.org
www.agrability.okstate.edu
www.cdc.gov/niosh/topics/aginjury
www.ok.gov/odol/

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Prevention

The following are general farm safety recommendations:

- Install rollover protective structures (ROPS) and seat belts on all tractors for which there is a manufactured retrofit.
- Use a seat belt at all times while riding on a ROPS-equipped tractor.
- Maintain safe speeds.
- Avoid operating tractors near ditches, embankments/steep slopes, and holes.
- Use slow moving vehicle placards when operating machinery on a roadway.
- Use proper implements for hauling hay.
- Ensure the weight and distribution of the tractor's load is appropriate.
- Keep a fire extinguisher on tractors.
- Maintain tractors and other farm equipment in good working order. Inspect equipment and vehicles regularly.
- Check for people and obstacles before moving equipment.
- Never start or operate a tractor unless seated in the driver's seat.
- Disengage the power take-off and shut off the tractor before dismounting.
- Always read package labels and Material Safety Data Sheets for all types of crop protection, fertilizer, and other chemicals or animal medications.
- Always wear personal protective equipment when advised including gloves, coveralls, boots, helmet, safety goggles, face shield, etc.