

Fatal injuries in farming, horticulture and fish farming in Scotland from 2003/04 to 2013/14

Operational Strategy Division (OPSTD), Agriculture, Waste and
Recycling Sector

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Part One: Fatal injuries in farming, horticulture and fish farming from 1 April 2003 to 31 March 2014

Introduction

1 This report summarises the fatalities investigated by inspectors from the Health and Safety Executive (HSE), reported in the farming sector in Scotland between 1 April 2003 and 31 March 2014. This report only includes farming, horticulture and fish farming and excludes any investigations carried out by local authorities.

2 Data for the period 1 April 2013 to 31 March 2014 is provisional. The report summarises fatal injuries notified to HSE within farming over a ten-year period 2003/04–2012/13. It identifies trends and highlights key issues from the investigation of fatal injuries involving employees, the self-employed and members of the public during this period.

General

3 Seventy-six (76) people died in Scotland as a result of a farming activity over a ten-year period (1 April 2003 to 31 March 2013).

4 The total number of deaths among workers (ie employees and self-employed) over the same ten years was 66. More self-employed people (approximately 60%) were killed compared to employees.

5 Ten members of the public died, four of them were children under the age of 16. For further details see Tables 2 and 4.

6 The average number of deaths over a ten-year period was eight with a range between 5 and 10 (see Table 1 for details).

Ten-year comparison

Table 1 Ten-year comparison

Year	Number of fatalities (Scotland)
2003/04	5
2004/05	7
2005/06	9
2006/07	8
2007/08	10
2008/09	5
2009/10	8
2010/11	10
2011/12	6
2012/13	8
Total	76
2013/14 (p)	7

Key points over the ten-year period

7 As with the national profile, transport caused more deaths than any other category. Struck by moving vehicles; run over by tractors and farm equipment; caught between moving vehicles, equipment and structures; or trapped by an overturned vehicle had caused 35% (26) of the total deaths.

8 The second largest category, 17% (13) of deaths, was falls from a height. A fall through a fragile roof while carrying out maintenance work caused the majority of the deaths.

9 The third largest category was drowning and asphyxiation, 14%. Most of the 11 victims had drowned during harvesting, diving or travelling along fish farms on a boat. Two workers were asphyxiated inside a compartment on a barge used for fish farming.

10 Cattle had caused 12% (9) of deaths. Most of the victims killed by a farm animal had been attacked, trampled or crushed by a cow or bull.

11 Farm machinery caused a further 8% (6) of deaths. Entanglement in potato harvesters or unguarded power take-off (PTO) shaft attached to a tractor; becoming trapped inside a running baler during maintenance, cleaning or clearing a blockage on a combine harvesters; and being dragged into running augers had caused serious injuries leading to death.

12 The remaining deaths on farms had been caused by contact with electricity (5%) and being struck by an object (4%); followed by exposure to a harmful substance (3%); fire and being trapped by something collapsing.

Cause of fatality

Chart 1 Cause of fatality (ten-year comparison 1 April 2003 to 31 March 2013)

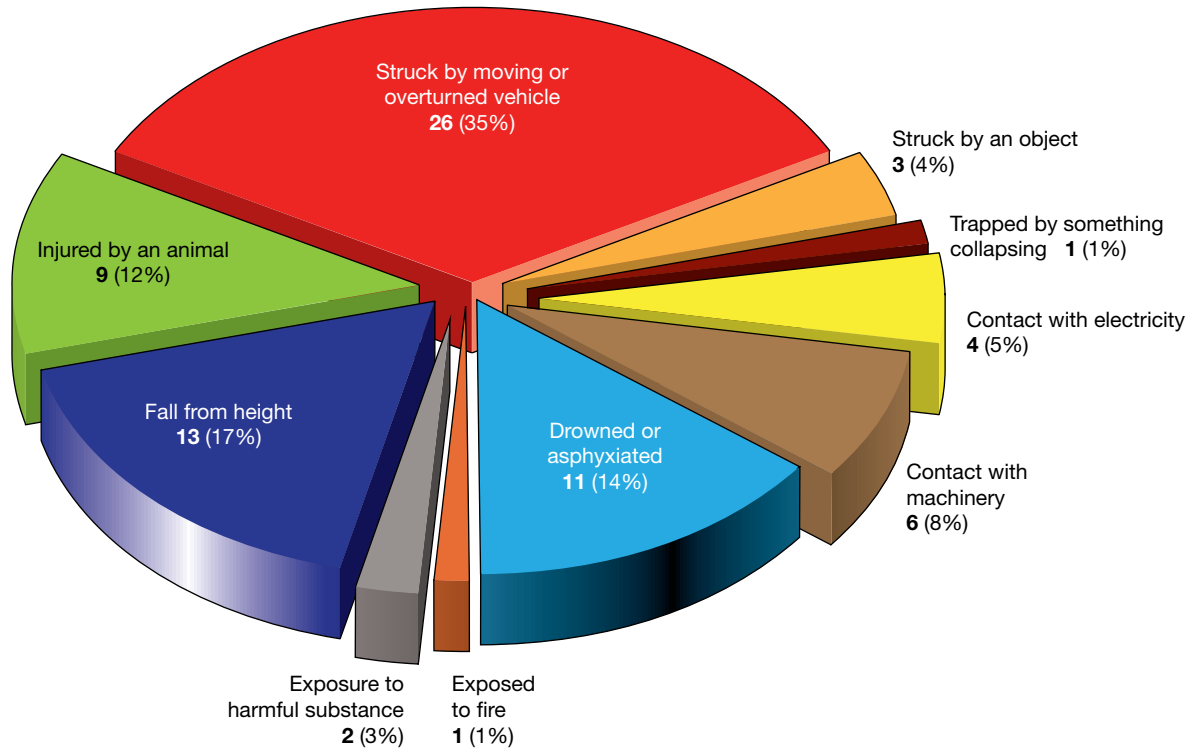


Chart 2 Fatal injuries by cause – percentage in 2013/14 against previous ten years (1 April 2003 to 31 March 2013)

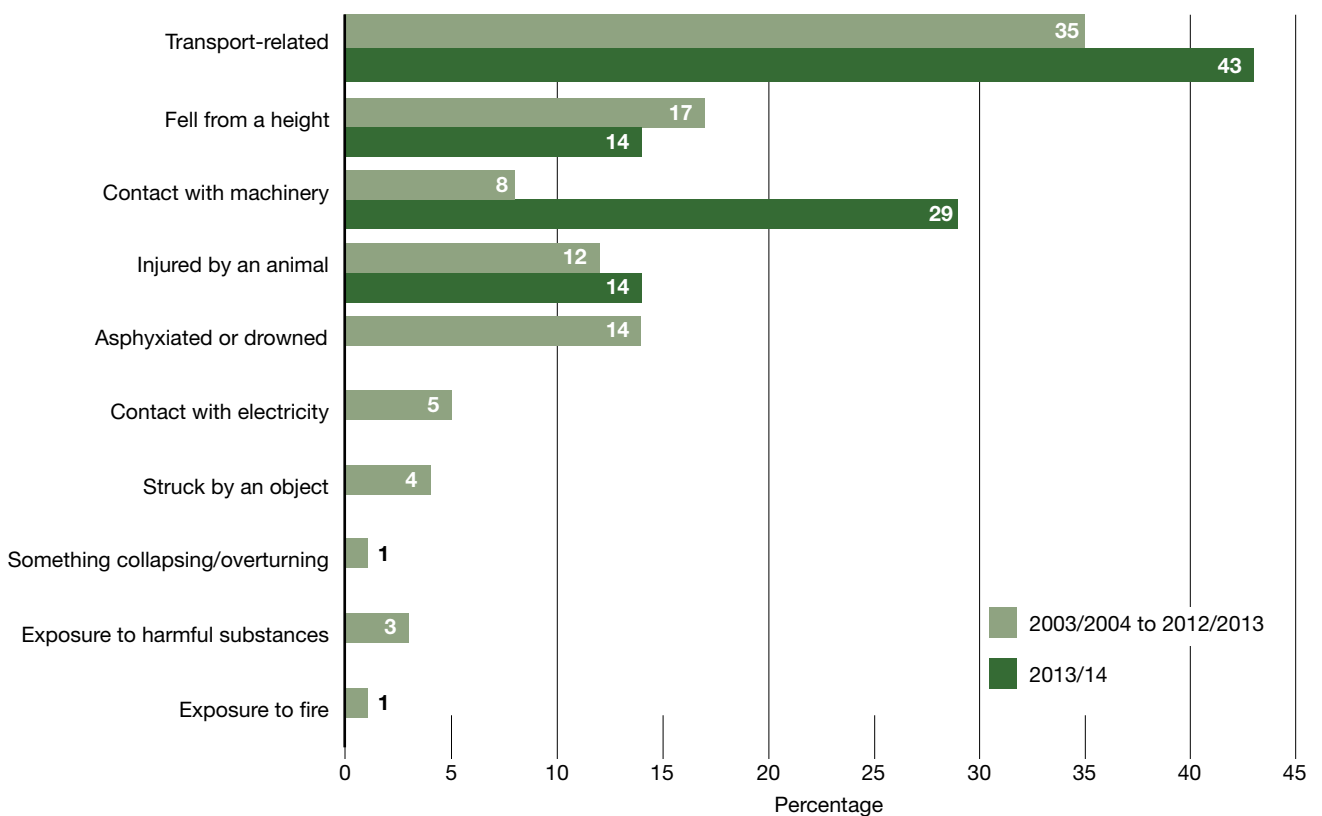
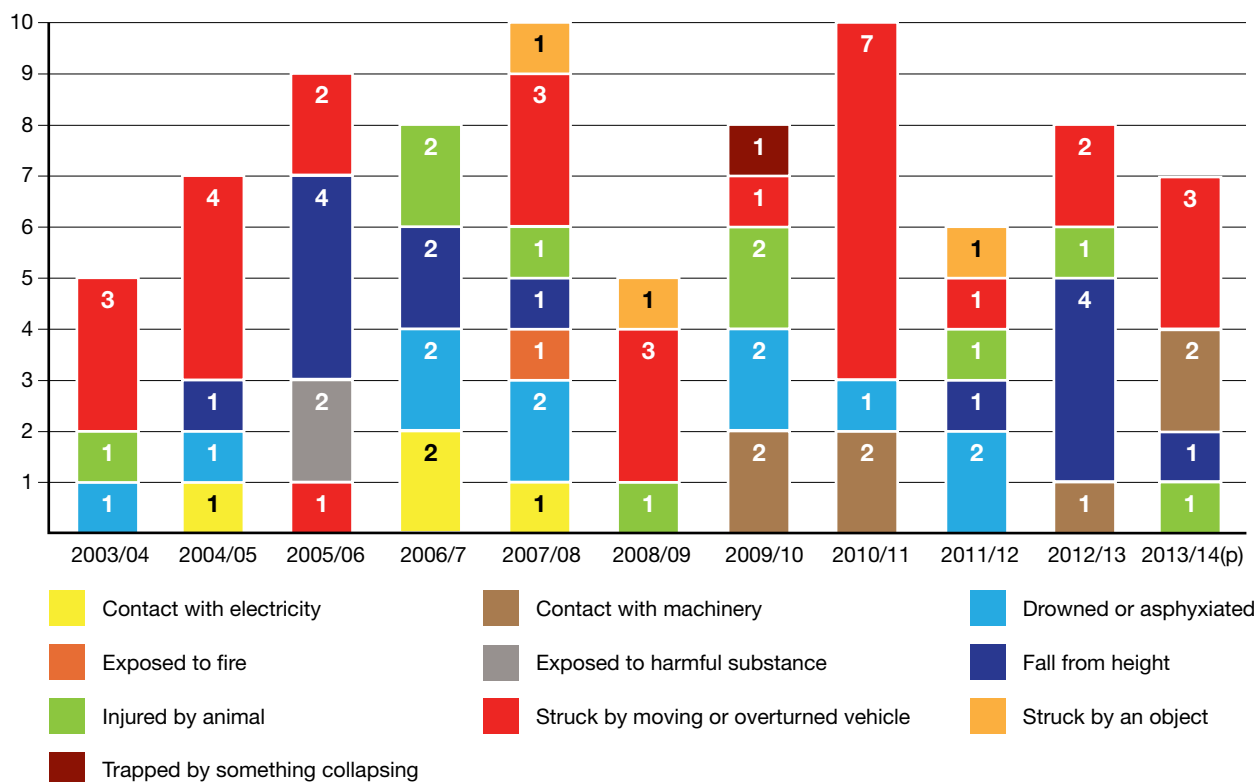


Chart 3 Cause of fatality (11-year comparison 1 April 2003 to 31 March 2014(p))



Employment status

Table 2 Ten-year comparison by employment status

	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	Total
Employee		4	1	4	5	2	4	2	2	2	26
Self-employed	1	3	6	3	5	3	4	6	4	5	40
Member of the public	4		2	1				2		1	10
Total	5	7	9	8	10	5	8	10	6	8	76

Table 3 Cause of fatality (ten-year comparison 1 April 2003 to 31 March 2013)

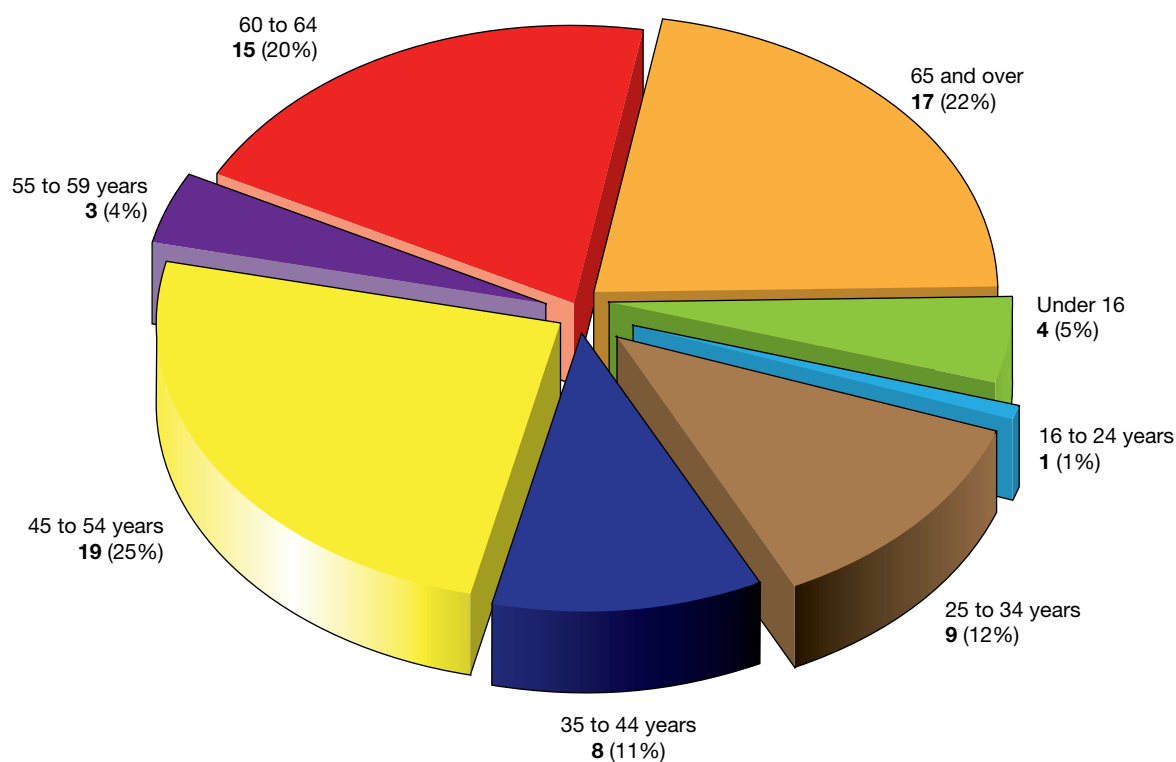
Cause	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	Total
Contact with electricity		1		2	1						4
Contact with machinery			1				2	2		1	6
Drowned or asphyxiated	1	1		2	2		2	1	2		11
Exposed to fire					1						1
Exposure to harmful substance			2								2
Fall from height		1	4	2	1				1	4	13
Injured by an animal	1			2	1	1	2		1	1	9
Struck by moving or overturned vehicle	3	4	2		3	3	1	7	1	2	26
Struck by an object					1	1			1		3
Trapped by something collapsing							1				1
Total	5	7	9	8	10	5	8	10	6	8	76

Age

Table 4 Age (ten-year comparison 1 April 2003 to 31 March 2013)

Age band	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	Total
Under 16	1		1	1				1			4
16 – 24						1					1
25 – 34				2	2		2		3		9
35 – 44			1	1	2	1		1		2	8
45 – 54		4	3	3	2	1	3	1		2	19
55 – 59	1		1					1			3
60 – 64	1	2	1	1	1	1	1	3	1	3	15
65 and over	2	1	2		3	1	2	3	2	1	17
Total	5	7	9	8	10	5	8	10	6	8	76

Chart 4 Fatalities by age (ten-year comparison 1 April 2003 to 31 March 2013)



Part Two: Summary of fatalities in Scotland from 2003/04 to 2013/14

1 April 2003 to 31 March 2004

A 79-year-old member of the public, assisting his friend to bale hay, was found unconscious next to the baler. After baling had finished the farmer drove his tractor down a sloped, steep field without noticing his friend had stepped onto the baler drawbar. As he descended the slope, the farmer lost control of the tractor. The baler jack-knifed causing the tractor to stall. The farmer found his friend unconscious next to baler. He subsequently died in hospital.

A 7-year-old girl was hit by a reversing tractor and trailer as she cycled in the farmyard. She was riding her bicycle behind a tractor pulling a trailer loaded with potato boxes and was hit by the trailer as the tractor reversed.

A 62 year-old self-employed farmer died when he was pinned beneath his overturned ATV. It seems he was attempting to cross a narrow ditch on a downward slope. Although experienced and familiar with the area, he had not undertaken any quad bike training, nor was he wearing a safety helmet. A sharp drop at the crossing point would have made the ATV unstable, even at moderate speeds. He was found lying on his back in the ditch with the ATV upside down, lying on top of him.

A 74-year-old member of the public was attacked by a Highland cow while walking with his family on a private road through an estate. A small group of cows and young calves had been moved to a new area in preparation for ear tagging. The cattle had been left alone over lunch, during which time the man and his family walked past. One cow left her calf and butted the walker, lifting him off his feet. There was no previous history of the cattle behaving aggressively and they were used to large numbers of walkers crossing the estate. He died the following day from head injuries.

A 57-year-old farmer's wife was asphyxiated in a grain bin while attempting to clear debris. She was helping her husband load the contents of the grain store into a haulage contractor's trailer. She climbed onto the top of the grain to clear surface debris while the farmer went to start the augers. She was trapped inside the silo and was pulled under the surface before the augers could be switched off. She was asphyxiated by the inhalation of grain and lack of oxygen.

1 April 2004 to 31 March 2005

A 72-year-old self-employed farmer was run over by a reversing tractor and trailer. A contractor was clearing topsoil and levelling site in readiness for hardcore with small excavator. He was depositing the soil in two trailers hauled by tractors. When one of the trailers had been filled the driver reversed the tractor/trailer combination knocking the farmer to the ground.

A 47-year-old employee was killed when the forklift truck he was driving overturned. He was driving down a winding tarmac road on an incline. The brake seals were leaking and as a result the foot brake was defective. He lost control of the forklift and hit a wall when the brakes failed. The machine appears to have toppled over crushing him underneath.

A 54-year-old employee died when the all-terrain vehicle (ATV/quad bike) he was driving overturned on steep hill near a pheasant feeding area. He was filling in for the full-time gamekeeper who was going into hospital. The job involved driving an ATV that he had not driven before. The ATV was fitted with a box mounted on the rear containing grain feed. When the full-time gamekeeper returned home, he noticed the ATV was not in garage. The employee was discovered approximately 200 m away from the ATV. As a lone worker there was no system in place to ensure his safety.

A 61-year-old employee was crushed between a forklift truck and a spinner. He was using a forklift truck to lift and position two bags of fertiliser over a spinner and had then moved between the two to make cuts in the bottom of the bag with a hand knife. He had not made the cuts when suddenly the forklift rolled forwards crushing him against the spinner. The forklift truck was in a poor state of repair and it is believed that the forks suddenly tilted forwards under the weight of the load. Tests concluded that the handbrake was not functioning correctly nor was it able to hold the vehicle.

A 62-year-old self-employed farmer fell from a homemade lifting cage, which became detached from the forks of a telescopic lift truck. The cage was not secured to the forks of the lift truck. A metal roof beam was lashed to the cage as the farmer's son operated the lift truck and attempted to lift the cage into position in a shed under construction. As the cage was lifted the beam slipped through the ropes onto the cage, dislodging it from the forks. The beam, cage and farmer fell onto the concrete floor. He sustained multiple fatal injuries. The cage was not secured to the forks nor was the beam securely attached to the cage and in any event, it should not have been lifted into position in this manner.

A 46-year-old employee was electrocuted when a trailer contacted an overhead power line (OHPL). He was moving chicken feed on a farm using an articulated lorry and tipping trailer. As the trailer was raised it came into contact with an 11 kV OHPL. It is thought that he had stopped to dump a small amount of residual feed and having raised the trailer, went to the back and opened the rear gate to empty out the feed. As he touched the trailer body he completed the circuit with the OHPL and was electrocuted.

A 46-year-old self-employed diver drowned while diving alone. It is believed that he was either fishing with creels, collecting seaweed or diving for scallops. There was no evidence that he had undergone formal commercial diver training or that he held a diving medical certificate.

1 April 2005 to 31 March 2006

A 57-year-old self-employed farmer was killed when his telehandler overturned down an embankment. He was using a telehandler with an attachment to remove a fence from the edge of a field at the top of a river bank. He had removed several posts from the ground. It appears that the vehicle overturned on uneven ground and rolled down, throwing the farmer before coming to rest.

A 5-year-old child was hit and crushed by an ATV against a gatepost. Her mother was tending a horse in a field, accompanied by her two children. She entered the

field with her youngest child leaving the ATV running. It appears that her other daughter may have accidentally lent or moved forward and operated the accelerator causing the ATV to drive forward hitting the youngest child and pinning her against the gate post.

A 60-year-old self-employed farmer died when he fell from a tractor cab. He had intended to move a tractor from a farm track to a shed. There were no witnesses but it would appear that he slipped while climbing into or out of the tractor cab and sustained a serious fracture of his left tibia. He died in hospital from a pulmonary embolism.

A 42-year-old self-employed farmer was killed when he fell through a fragile roof. It appears he was cleaning the valley gutter between 2 roofs when he fell through a fibre cement roof onto a cattle court below. He sustained head injuries.

A 71-year-old self-employed farmer died from head injuries after falling through a fragile roof onto a concrete floor. There were no witnesses to this accident but it would appear that he was carrying out maintenance work on his barn's cement sheet roof when he fell through a plastic roof light onto a concrete floor.

A 53-year-old farm helper died after falling through a fragile roof light striking his head on machinery below. He had been asked to check on livestock while the farmer was on holiday. A contractor had been engaged by the farmer to dismantle a steel portal frame shed. It appears the deceased had accessed the roof to speak to the contractor, who was removing roof sheets, when he fell.

A 74-year-old semi-retired self-employed farmer was trapped in a self-loading bale chopper. The farmer's son was laying fresh bedding for cattle using a bale chopper attached to a tractor. After chopping the first bale he left the tractor to check the 'hopper' for blockages. He returned to cab and activated the machine when he noticed in the mirror that his father was trapped by the rear hydraulic loading door.

A 37-year-old, casual employee was overcome by carbon monoxide while sleeping in a pheasant-rearing shed. He had been employed as a beater for a two-day shoot. A propane heater had been provided to keep the pheasant chicks warm – there were no chicks in the shed at the time. The employee was staying overnight and put the heater on to keep himself warm. He was found dead on his camp bed the following morning.

A 49-year-old self-employed farmer died when he accidentally ingested a harmful substance. It would appear that the farmer and a colleague were syphoning Propcorn (propionic acid) from a drum into smaller plastic containers. He started to syphon by mouth and received a mouthful of acid, which seems to have triggered a heart attack or similar. He was taken to the local surgery and then by ambulance to hospital where he died shortly afterwards.

1 April 2006 to 31 March 2007

A 47-year-old employee was charged by a cow which struck and knocked him over. He was helping bring in a cow from a field into the cattle court for observation after it had given birth to a stillborn calf. The cow was removed from the herd and 'cantered' along the road. The intention was to allow the cow to walk to the left of the yard to the cattle court. Instead it ran loose before suddenly running into the employee. He was flung backwards hitting his head on the yard surface.

A 60-year-old self-employed farmer was crushed by a cow while tagging a calf. His student was in the process of tagging a calf while he kept an eye on the mother. As the student approached the calf, the mother lowered its head. The farmer raised his stick in the air and began shouting, to keep the cow back. The cow charged him, pinning him against the front wall of the building with its head. He died from injuries sustained in the attack.

A 13-year-old boy died when he fell through a fragile roof to the concrete floor below. The farmer had used a tractor fitted with a front-end loader and bucket attachment to lift an employee to clean the valley gutters on a feed passage roof. The farmer and employee worked on the roof for a time brushing down moss off the roof and scraping down the gutter. The boy, noticing that cleaning work was being carried out, asked to be lifted up to the roof level in the tractor bucket to see what they were doing. He climbed out of the bucket onto the roof and moved towards the employee, who was working further along the valley gutter. Before reaching the worker he fell through a plastic skylight sustaining fatal head injuries.

A 54-year-old employee (crofter) was killed when he fell from a cliff. He was alone on the hills gathering sheep being grazed on common land when he fell from the crags. There were no witnesses; he may have slipped or stumbled or the ground may have given way. Given the harsh environment (steep, rocky hillside covered in heather) any of these causes would have been plausible. He was found below the summit and died from head and chest injuries received in the fall.

A 26-year-old migrant worker was electrocuted when he came into contact with an OHPL. He was constructing polytunnels and had assembled the extension pieces together to transfer them from one end of the field to the other. This route took him underneath a high-voltage OHPL. As he carried the galvanised steel extension pieces vertically, the uppermost piece came into contact with one of the conductors causing fatal electric shock and burn injuries.

A 34-year-old director was electrocuted when he touched the exposed metal parts of a mobile inclined conveyor which was being used to carry spent mushroom compost from a shed to a tractor located outside. The build-up of mushroom compost around the tail drum had caused a blockage. One of the farm employees used a power washer to dislodge any blockages, which later caused a spark. The director wanted to investigate the cause underneath the elevator. In doing so he touched the frame of the conveyor to steady himself so that he could bend down to see the problem. He slumped to the ground while still holding on to the conveyor with one hand and then collapsed as the power was switched off.

A 49-year-old self-employed fish farmer died when he drowned in a tank used to rear trout. The exact circumstances of the accident are not known, as there were no witnesses but it is believed that he was grading fish. He was found by his wife floating face down in a deep pond.

A 44-year-old employee drowned while harvesting fish. He was crewing a local fishing boat, but was missing when the boat returned to harbour. The weather was wet and windy and the handrail was missing. The boat was cluttered with equipment hampering access around the deck. There were no witnesses as to what happened or how he fell overboard. When his body was recovered it was found that he had not been wearing a lifejacket

1 April 2007 to 31 March 2008

A 43-year-old self-employed farmer and partner in a family farming partnership was crushed to death by a telescopic handler. He had been operating a telehandler when he dismounted the vehicle, as he approached the entrance to a cow shed, to open a feed bin. He was crushed between the telehandler, that had rolled forwards, and a feed hopper at the entrance to the shed. He died from crush injuries.

A 84-year-old self-employed farmer died when he was caught under the wheel of his tractor. He was in the process of laying feed for his cattle. There are no witnesses but it is likely that he was walking behind a driverless moving vehicle in his field and got off and on the moving tractor to unload crop from the back of the trailer. He was found lying injured in the field. He died from injuries that were consistent with him being crushed.

A 33-year-old farm worker died when his ATV hit a tree. He was using the ATV to herd cattle along a farm track when the vehicle left the track and struck a tree. It is assumed that he lost control of the bike, which veered off the track and descended down a river bank before colliding with the tree. He was found with his body against a tree with ATV resting on his lower legs and died from head injuries.

A 37-year-old farm worker was electrocuted by an OHPL. He was driving a tractor and trailer in a field and had raised the trailer. As soon as he had finished raising the trailer, he got out of his cab to work on the trailer brake mechanism. The trailer was touching one of the conductors of an overhead power line that crossed a field. He died from electrocution and burn injuries.

A 47-year-old self-employed farmer died when he fell and his head struck a concrete floor. He was taking hay from a bale for animal feed and placing it inside a tractor bucket when a column started to topple. He tried to run out of the way but the top bale fell onto the bottom of his legs causing him to fall onto a concrete floor inside a barn. He died from head injuries.

A 49-year-old self-employed farmer died when he fell through a roof onto a concrete floor below. There were no witnesses but it is believed that he was working on a flat section of roof between two sheds. A broken rooflight on one of the roofs needed to be replaced and he may have been assessing the job or removing weeds from the top of the shed on the other side. He either slipped or lost his balance and fell through a rooflight on the flat section of roof onto concrete floor below. He died from serious head injuries sustained.

A 74-year-old self-employed partner in a family farming business died when he fell backwards onto a concrete floor in the cattle yard. Both farmer and son were treating cows in a crush when one of the cattle decided not to go into the crush. The farmer entered the race and as he moved away from the front of the crush to the side of the race the cow kicked an unfastened gate in the cattle race beside the crush. The gate swung open hitting the farmer on the head and nose, knocking him onto the concrete ground. He died from serious head injuries sustained in the fall.

A 28-year-old migrant worker died when the temporary caravan that he was occupying at a farm caught fire. It is most probable that the fire started in the refrigerator casing as a result of heat generated in a poorly-made electrical connection inside the plugs. One worker managed to escape but later returned to rescue his colleague, to discover that he had already died from injuries caused by the fire.

A 70-year-old employee drowned when the tide came in. He was making a crossing on a causeway in difficult weather conditions and may have decided to

turn back due to heavy wind and rain. There are no witnesses but it is believed that he was attempting to turn his vehicle around when he drove into deep water and got into difficulty. He was found drowned with the vehicle immersed in the sea.

A 60-year-old employee was found dead on the shore. He was one of a five-man team that managed a number of freshwater fish farm sites. He was travelling on an open boat returning from cages across a tidal loch when it capsized. The weather had deteriorated while the fishermen were working on the cages and the boat was swamped on the return journey, ejecting all of the occupants into the water. The rest of the crew made it to shore. He was discovered by divers the following day having been drowned in sea water.

1 April 2008 to 31 March 2009

A 62-year-old self-employed farmer was crushed underneath his jeep. He was travelling to/from a rented field in which he grazed cattle. The vehicle overturned as he descended a sloping farm track. He died as he tried to escape from the overturning vehicle and was discovered nearby.

A 20-year-old gamekeeper was crushed underneath an ATV. He had been travelling along a farm hardcore/gravel rural track, which had a steep incline at its edge, when the ATV left the track. The employee appeared to have been fatally injured as he tried to escape the overturning ATV and was found nearby.

A 65-year-old self-employed farmer was pinned against a wall by a telehandler bucket. He was working alone in the barn using a telehandler fitted with a bucket to remove animal feed stored against a wall. It would appear that the bucket could not pick up any more of the feed so he got out of the vehicle to clear the last of it with a shovel. The handbrake was not applied and his dog was left inside the cab. He was standing between the bucket blade and the wall when the vehicle moved forward trapping him at the waist and crushing him against the wall.

A 42-year-old self-employed farmer died after a cow fell onto his leg. No one saw what happened. It would appear that the farmer was doing a job that he had done many times before with an animal known to have a placid nature. The farmer sustained a fractured ankle but died in hospital from complications.

A 49-year-old employee was crushed underneath a concrete panel. He was working with one of the farm business partners positioning a concrete panel that was intended to form part of the end wall of a barn when the panel fell onto him crushing him underneath.

1 April 2009 to 31 March 2010

A 46-year-old employee was found in a ditch trapped underneath an overturned tractor. He was driving the tractor and grain trailer along a farm road towards the field when he lost control of the tractor. There were no witnesses but he may have hit a curb, causing the tractor to veer towards the ditch and flip over. He was ejected out of the cab as it overturned. He died from traumatic asphyxia.

A 34-year-old farm worker was found entangled in a potato harvester. He was carrying out maintenance work on the machine. It is believed that he started the harvester to check its operation and fell or slipped into the machine and was then drawn in by the rollers. The farmer found the harvester rotating with the worker's leg and arm entangled in the machines rollers. He died from serious crush injuries.

A 81-year-old self-employed farmer was found trapped in a trailer tailgate. He was helping to unload a trailer full of barley onto the grain barn floor. No one saw what happened but when the tractor and trailer were driven out from the barn the farmer was seen trapped by the tailgate. He may have been clearing grain from the trailer when the tractor was started up by a worker and the tailgate closed hydraulically.

A 62-year-old self-employed farmer was crushed underneath a large boulder. He was retrieving a number of sheep carcasses on farmland that had been buried under snow by an avalanche. As the snow melted, he attached one end of a rope to the boulder so that he could retrieve a carcass buried beside it. The snow beneath the boulder gave way and it rolled towards the farmer trapping him.

A 84-year-old self-employed farmer died from injuries consistent with being trampled by a herd of cows. He had been walking through the farm yard towards his tractor before he died. There were no witnesses but it would appear that he may have collapsed in the yard and was trampled by some of the cows fracturing his ribs. He was found face downwards in the yard.

A 49-year-old self-employed farmer was trampled to death by a bull. He went to pick up a tractor and trailer but realised that something was missing. He then drove the tractor back to the farm. As he walked across the field he was attacked and trampled by a bull.

Two employees (aged 30 and 45) were asphyxiated inside a compartment on a barge used for fish farming while attempting to rescue a colleague. Two workers had entered a compartment below deck to inspect the hydraulics on a faulty crane. One worker felt dizzy and left the compartment. He raised the alarm when he saw his colleague unconscious. The site manager then entered the compartment (wearing a respirator) to attempt a rescue. He managed to get the worker in a sitting position but then himself lost consciousness. On seeing the manager collapsed on the floor, another employee fetched a length of rope and descended into the compartment, but he too collapsed as soon as he reached the bottom. The worker was resuscitated by the emergency services but the two rescuers died due to the lack of oxygen.

1 April 2010 to 31 March 2011

A 58-year-old self-employed farmer died when she fell off a quad bike. She had left the farm on the bike to feed sheep but had not returned when expected. There no witness and it is assumed that as she had crossed the stream while it was deep and in full flow, causing her to fall off her bike. The farmer found the bike in the stream at the bottom of the field and his wife further upstream several days later.

A 9-year-old child was found trapped underneath a farm quad bike. He was riding the bike in a field when it overturned. There are no witnesses and it is assumed the bike toppled over as it was being turned in a field nearby to the farm buildings. He was found trapped beneath the bike by his father and died from multiple injuries.

A 60-year-old farm manager was crushed underneath an overturned quad bike. He had set out to spray bracken on a quad bike fitted with a rear mounted sprayer boom but had not returned home that evening. He was later found by his partner on the ground with the bike on top of him. He died from asphyxiation.

A 62-year-old self-employed farmer was run over by a reversing tractor. He was contracted by a local farmer to plough a field and had left his tractor in the field. He then walked over to the farmer's tractor and stood behind it. The farmer, unaware

that the other farmer was behind his tractor, raised his plough and began to reverse his vehicle. As the farmer manoeuvred his vehicle in reverse to continue ploughing he ran over the other farmer who then died from severe crush injuries.

A 70-year-old employee was crushed when a tractor overturned. He was re-seeding the field with a tractor and seed drill when the tractor overturned on a downhill slope. He was later found near the overturned tractor and may have been ejected from the tractor cab as the tractor rolled over before it came to rest against a wired fence. He died from crush injuries.

A 63-year-old self-employed farmer was found trapped between a tractor and a shed door. He was working alone collecting bales of hay and had dismounted the tractor to close the gate when the tractor rolled back down a slope and trapped him against the shed doors. He died from severe crush injuries.

A 39-year-old self-employed temporary worker was found trapped underneath a forklift truck. He was working in a potato shed on a forklift truck and had been moving potato boxes in and around the shed. As he manoeuvred the truck in reverse with the mast raised, it struck a metal roof beam causing the truck to topple over. He had tried to jump out of the cab but was trapped underneath the truck as it overturned, trapping his upper body and neck. He died from severe injuries.

A 46-year-old self-employed farmer was trapped beneath a baler tailgate. He was standing under the baler's raised tailgate and was carrying out maintenance work that included spraying oil on the baler chamber when the tailgate closed trapping him. He died from severe crush injuries.

An 83-year-old self-employed retired farmer became entangled on a unguarded PTO shaft. He was helping his son on the family farm when he came into contact with the unguarded PTO attached to a tractor. He died from severe injuries.

A 72-year-old member of public fell and drowned in a river. He was fishing in the river and appeared to have lost his balance and fell into the water. He was swept away and found floating in shallow water downstream.

1 April 2011 to 31 March 2012

An 84-year-old self-employed farmer was run over by a tractor. He had walked into a cow shed while his son was spreading straw bedding using a tractor. His son did not see him enter the shed and he may have slipped or fallen on an uneven surface in the path of the moving tractor. He was run over and died from multiple injuries.

A 68-year-old self-employed farmer was struck on the head by parts of a split rim from a telehandler's wheel. He was inspecting a slow puncture on a telehandler wheel (that had been re-inflated the previous day) when the tyre explosively deflated, causing the locking ring to separate from the multi-piece wheel, striking him in the face. He died from multiple injuries.

A 64-year-old self-employed farmer was dragged around the field by a cow. He was working in the field with cows that were due to calve. It would appear that he had placed a rope halter on a cow and then tied the loose end around his waist. It is assumed that the cow suddenly bolted tightening the rope and dragging the farmer around the field. He was discovered in the field with multiple injuries.

A 32-year-old employee died when he slipped and fell down a ravine. He was rounding up sheep on hilly ground near to a cliff face while other workers were

nearby. Nobody saw what happened but one of the workers heard a noise and saw the shepherd falling down the hill. He died from serious head injuries.

A 33-year-old diver went missing while fishing from a vessel. He was diving commercially for scallops and had left the harbour on a vessel with another diver. He did not surface from his third dive of the day. His body was recovered.

A 31-year-old diver was found drowned on the seabed. He was commercially diving for shellfish and had entered the water from a fishing vessel. Two of his colleagues saw him disappear into the water but were unable to rescue him.

1 April 2012 to 31 March 2013

A 41-year-old farm worker was found trapped underneath a quad bike. There were no witnesses but it is assumed that the ATV had been loaded with buckets of animal feed and was being driven across a sloping field. The terrain and load may have caused the bike to become unstable and roll over. The final position of the ATV suggests that it rolled over sideways down the slope crushing the worker underneath it. He died from crush injuries to his chest.

A 41-year-old self-employed farmer died when his ATV overturned into a ditch. His mother was travelling on a road at the bottom of the hill and had seen him travelling down the hillside on his quad bike across the slope. For reasons unknown he then entered a slight dip. His mother later noticed the wheels of the quad bike up in the air. She found her son lying in a waterlogged ditch with the quad bike on top of him. The investigation established that he was not wearing a helmet and had not received any training.

A 63-year-old worker died when he fell through a fragile roof. He and his colleague were working on top of a cattle shed, replacing damaged fibre cement roof sheets with new ones. It is assumed that he stepped on or fell through the fragile roof light located above the cow cubicles and died from his injuries.

A 71-year-old self-employed farmer died when he fell through a fragile roof. He and his grandson were removing cement roof sheets from a lambing shed roof. Both appeared to have accessed the roof from a ladder and had climbed onto the cement sheets. No precautions were in place to prevent a fall and it is assumed they were both taking bolts out of the roof sheets and then throwing the sheets into a trailer parked underneath. It is assumed that the farmer was either walking along the line of the purlin bolts or beam when he fell through a roof light onto the concrete floor below. He died from serious head and chest injuries.

A 62-year-old self-employed farmer died when he fell from the top of a silage clamp. He was working with his son and had been attempting to remove plastic sheeting from the top edge of the clamp inside a cattle shed. He had moved to the front open edge of the clamp to pull the sheeting back, when his foot became caught in the sheeting. He then lost his balance and fell from the top of the clamp onto the concrete floor below and died from serious head injuries.

A 50-year-old self-employed farmer died when he fell into the back of a large round baler that he was jet washing. There were no witnesses and it is assumed that he was standing on a platform on the baler using the jet washer to clean it, while the machine was still running. It is not known how he became trapped inside the running baler but it is most likely that he slipped and fell inside while trying to clean the interior of the machine. He was found trapped deep inside the machine and died from severe crush injuries.

A 48-year-old self-employed crofter died when he fell down a cliff. He was helping his brother rescue a lost sheep stranded at the bottom of a cove on a rocky coastline. They had decided to throw a bale of grass down to the sheep for it to feed on until it could be rescued by boat. As they both reached the spot above the cliff where the sheep was, the crofter wandered off down to the bottom of the cove to persuade the sheep to climb back up to the cliff to common grazing. As he climbed the cliff face he lost his footing, slipped and fell backwards.

A 64-year-old family member was trampled to death by cattle. There were no witnesses but it is assumed that he was walking in the fields with cows and a bull to open a gate between adjoining fields to allow cattle to feed on fresh grass when he was attacked. He was discovered by his daughter in the field with injuries consistent with having been trampled by cattle.

1 April 2013 to 31 March 2014

A 37-year-old self-employed agricultural mechanic was killed when both tractor and plough overturned into a ravine. There were no witnesses and it is assumed that he was ploughing close to the edge of a field when the tractor overturned and rolled down a gulley into the ravine. He was found at the bottom of the ravine next to the tractor.

A 50-year-old self-employed crofter was found trapped under an ATV. He was working underneath the vehicle on a ramp when the vehicle rolled down the ramp and crushed him. He died from serious chest and abdominal injuries.

A 51-year-old self-employed farmer died when his bike overturned. He was driving his quad bike along a ridge close to the edge of sloping wet ground when he lost control of it. He tried to jump off but was crushed by the bike as it rolled down the slope. He suffered injuries to his shoulder and groin and later died in hospital.

A 39-year-old self-employed farmer was dragged into a combine harvester. He was clearing a blockage when the augers went into forward operation and pulled him inside the machine. He died from crush injuries.

A 66-year-old self-employed farmer died when he was dragged into a silo auger. He had entered a grain silo to clear a blockage when he became entangled in the sweep auger. He died from serious injuries.

A 71-year-old self-employed farmer died when he fell from scaffolding. He was dismantling scaffolds from his farm house and was handing scaffold board to a worker when he fell onto the ground below against a pallet of slates. He died from head injuries.

A 78-year-old member of the public was attacked by a bull. He was walking his dog in a field with calves and cows and the bull attacked him. He was taken to hospital but later died from his injuries.

Table 5 Analysis of fatal injuries in Scotland (over a 10-year period by year – 2003/04 to 2013/14)

Year	Accident causation	Agent
2013/14	Transport (3) Machinery (2) High fall (1) Animal (1)	Tractor and plough (1) and ATV (2) Combine harvester (1) and grain sweep auger (1) Scaffolding (1) Bull (1)
2012/13	High fall (4) Transport (2) Machinery (1) Animal (1)	Fragile roof (2), Cliff (1), and silage clamp (1) ATV (2) Large round baler (1) Cattle (1)
2011/12	Drowned/asphyxiated (2) Struck by (1) Transport (1) High fall (1) Animal (1)	Water (2) Split rim wheel (1) Tractor (1) Ravine (1) Cow (1)
2010/11	Transport (7) Machinery (2) Drowned/asphyxiated (1)	Tractor (3), ATV (3) and forklift truck (1) Bailer tailgate (1) and PTO (1) River (1)
2009/10	Drowned/asphyxiated (2) Animal (2) Machinery (2) Transport (1) Struck by (1)	Barge compartment (2) Bull (1), cow (1) Trailer tailgate (1) and potato harvester (1) Tractor (1) Large boulder (1)
2008/09	Transport (3) Struck by (1) Animal (1)	Jeep (1), telehandler (1) and ATV (1) Concrete panel (1) Cow (1)
2007/08	Transport (3) Drowned/asphyxiated (2) High fall (1) Electricity (1) Animal (1) Fire (1) Struck by (1)	Tractor (1), telehandler (1) and ATV (1) Water (2) Fragile roof/rooflight (1) OHPL (1) Cow/gate (1) Temporary caravan (1) Bale (1)
2006/07	Animal (2) High fall (2) Electricity (2) Drowned/asphyxiated (2)	Cow (2) Fragile roof (1) and cliff (1) OHPL (1) and mobile conveyor (1) Water (2)
2005/06	Fall from height (4) Transport (2) Machinery (1) Contact with harmful substance (2)	Fragile roof (2) and tractor cab (1) ATV (1) and telehandler (1) Bale chopper (1) Carbon monoxide poisoning (1) and Propcorn (Propionic acid) (1)

Year	Accident causation	Agent
2004/05	Transport (4) High fall (1) Electricity (1) Drowned/asphyxiated (1)	Forklift truck (1), forklift truck and spinner (1), ATV (1), and tractor and trailer (1) Lifting cage attached to a telehandler (1) OHPL (1) Water (1)
2003/04	Transport (3) Drowned/asphyxiated (1) Animal (1)	ATV (1), tractor trailer (1), and tractor and baler (1) Grain bin (1) Cow (1)

The presentation of statistics in this report

1 HSE's official statistics are published by HSE's Statistics Branch and are subject to detailed review and scrutiny in line with national statistics protocols and quality standards. Fatal incident statistics are published for all industrial sectors annually (usually at the end of June), at which time the provisional figures for the 12 months to the end of the previous March are published and the figures for the preceding year are finalised.

2 The figures published are provisional because detailed checks need to be made to determine whether the fatality is legally reportable under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR) and to ensure that it is properly classified against the appropriate industry. These checks are important. Wider lessons cannot be fully learned from individual tragedies and HSE's interventions and messages cannot be properly targeted unless they are based on reliable information about the sector in which the incidents occur and the frequency with which they happen (incidence rates). HSE's Statistics Branch and staff in HSE's industry-specific sectors use data of this kind to work out patterns of incident causation, trends and incidence rates. This helps HSE prioritise and devise effective interventions with particular industry sectors and types of businesses. The number of fatalities cannot be finalised until 16 months after the year end because people injured at work who die from their injury within 12 months are, by international statistical convention, counted as work fatalities in the year of the injury.

3 The collective headline statistics recorded in this report are based on investigations carried out by inspectors from HSE in farming so will differ from HSE's overall agriculture figures published.

4 Since April 2010, HSE has used the Standard Industrial Classification scheme 2007 (SIC 2007) to define industries, rather than the SIC 2003 scheme used in previous years. The reclassification to SIC 2007 has affected many of the tables for the agriculture industry published on HSE's statistical website at www.hse.gov.uk/statistics/index.htm.

5 The Scotland Farm Safety Partnership has been developed to address the hazards and risks in the farming industry, therefore, this report will only include:

- traditional farming activities such as arable, dairy, livestock and mixed farming, the growing of fruit and vegetables, production horticulture, and animal husbandry services; and
- aquaculture (fish farming).

Fatal injuries in forestry and arboriculture have been excluded from this report.

6 76 people were killed on Scotland farms between 1 April 2003 and 31 March 2013 and a further seven deaths occurred in 2013/14. Figures in this report are based on intelligence collected from HSE operational staff so may differ slightly from the number of deaths published centrally by HSE across all industries (one of which is 'agriculture').

7 We hope that this approach will not lead to any confusion or concerns about discrepancies between HSE reports. HSE seeks to be transparent about its methodology; to provide up-to-date information and to maximise the immediate use to which this statistical information can be put with the overall aim of learning lessons. We hope the information in this report can be used to prevent or reduce future tragedies.

If you have any queries about this report, contact the Health and Safety Executive's Agriculture, Waste and Recycling Sector.

Further advice

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online (including Farmwise) and order priced publications from the website. HSE priced publications are also available from bookshops.

Current information and advice is available at:
Agriculture www.hse.gov.uk/agriculture

This report is available at: www.hse.gov.uk/agriculture/resources/fatal.htm

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