

# Fatal injuries in farming, forestry, horticulture and associated industries 2014/15

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

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# Part One: Fatal injuries in farming, forestry, aquaculture, arboriculture and horticulture 1 April 2014 to 31 March 2015

## Summary and key points

The total number of reported fatal injuries resulting from work activities in the agriculture sector was 36, including 4 members of the public.

The total excludes reported deaths from reportable diseases and fatal injuries investigated by local authorities.

- Thirty-six (36) deaths were reported in 2014/15, 5 more than the previous year.
- The total of 32 deaths among all workers (ie employees and the self-employed) is an increase of 5 from the previous year's figure of 27.
- A total of 13 employees were killed; an increase of three from the previous year. The average number of employee deaths over the previous 5 years was 12; the range being between 10 and 13.
- Nineteen (19) self-employed people died during the year; 2 more than the previous year. The average over the previous 5 years was 22; ranging between 17 and 25.

**Table 1** Six-year comparison

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15(p)
Employed	13	12	12	10	9	13
Self-employed	25	23	22	21	17	19
Non-employed	5	8	6	5	4	4
<b>Total adults</b>	<b>40</b>	<b>40</b>	<b>40</b>	<b>35</b>	<b>28</b>	<b>36</b>
Total children (<16)	3	3	0	1	2	0
<b>Total (SIC 2007, Groups 1, 2 and 3)</b>	<b>43</b>	<b>43</b>	<b>40</b>	<b>36</b>	<b>30</b>	<b>36</b>
Arboriculture	0	1 <sup>1</sup>	1 <sup>2</sup>	1 <sup>3</sup>	1 <sup>4</sup>	0
<b>Total</b>	<b>43</b>	<b>44</b>	<b>41</b>	<b>37</b>	<b>31</b>	<b>36</b>

1 Self-employed tree surgeon

2 Employed tree surgeon

3 Member of the public/landowner

4 Employee

The total number of workers killed over the five-year period (2010/11 to 2014/15) was 161. Of these, 58 (36%) were employees and 103 (64%) were self-employed.

In addition, four members of the public were killed in 2014/15. The average number of deaths involving members of the public over the previous five years was six. There were no child deaths in agriculture during 2014/15.

**Table 2** Fatalities by country 2014/15

	Employed	Self-employed	Non-employed	Total
<b>England</b>	9	10	4	23
<b>Scotland</b>	2	7	0	9
<b>Wales</b>	2	2	0	4
<b>Total</b>	<b>13</b>	<b>19</b>	<b>4</b>	<b>36</b>

### Age profile

Of the 32 deaths involving workers:

- four were between the ages of 16 and 34 and 7 between 35 and 54;
- a further seven were between 55 and 64;
- fourteen workers were over 65 of which 10 were self-employed farmers.

The youngest self-employed person was 37 and the oldest was 80. Among employees the ages ranged from 19 to 72.

**Table 3** Fatal injuries by age, 2014/15

Age	Workers	Members of the public	Total
<b>16–24</b>	3	0	3
<b>25–34</b>	1	0	1
<b>35–44</b>	3	0	3
<b>45–54</b>	4	0	4
<b>55–64</b>	7	2	9
<b>65 and over</b>	14	2	16

### Cause of fatality

During 2014/15, the two main causes of fatal injuries were transport and injured by an animal followed by struck by an object, fall from a height and drowning and asphyxiations.

Eight people (22%) died after being either: struck by moving vehicles; run over by tractors and farm equipment; caught between moving vehicles, equipment and structures; or trapped by an overturned vehicle.

Of the transport-related deaths:

- three involved tractors, 2 attached to equipment: an 80-year-old farmer was run over by tractor against a tree; a 25-year-old farm worker was found crushed under a tractor trailer; and a 72-year-old retired farmer was run over by a reversing tractor-mounted cutter;

- three involved all-terrain vehicles (ATVs): a 71-year-old and 64-year-old self-employed farmer died when their ATV/quad bike overturned and a 72-year-old worker was crushed under a side-by-side ATV;
- two involved telescopic handlers: a 43-year-old employee was run over by a reversing telehandler and a 20-year-old farm worker was trapped and crushed to death when the telehandler overturned on a slope.

Of the animal-related deaths, 8 (22%) involved cattle.

Six of them involved workers:

- A 68-year-old self-employed farmer was knocked over by cattle; a 62-year-old self-employed farmer was kicked in the chest by cattle; a 67-year-old self-employed farmer was found dead in a feed manger; a 57-year-old farm worker was trampled to death by a cow; a 79-year-old self-employed farmer was trampled by cattle; and a 62-year-old self-employed farmer was pinned against a cattle rail.

Two involved members of the public:

- A 63-year member of the public was attacked and knocked to the ground by cattle and a 61-year-old was trampled to death by cattle.

Struck by a falling, flying or moving object caused six deaths (17%).

- Two involved trees: a 52-year-old self-employed contractor was crushed by a tree; and a 58-year-old self-employed contractor was struck by a tree branch.
- A 67-year old employee was struck by a lorry trailer tailgate; a 46-year-old self-employed farmer was crushed underneath a tractor's front loader arm; a 79-year-old self-employed farmer was struck by a falling hay bale and a 73-year-old member of the public was struck by a metal object from a flail hedge cutter.

Falls from a height caused 5 (14%) deaths.

Three incidents involved fragile roofs:

- a 67-year-old self-employed farmer died when he fell through a fragile roof; a 68-year-old self-employed farmer was repairing a barn roof when he fell through the fragile roof; and a 67-year-old farm worker fell onto a concrete floor below when the barn roof collapsed;
- a 57-year-old employee died when he fell from the back of a lorry; and a 79-year-old self-employed farmer was repairing a shed roof from a ladder when he fell to the ground below.

Drowning and asphyxiation caused a further 5 (14%) deaths.

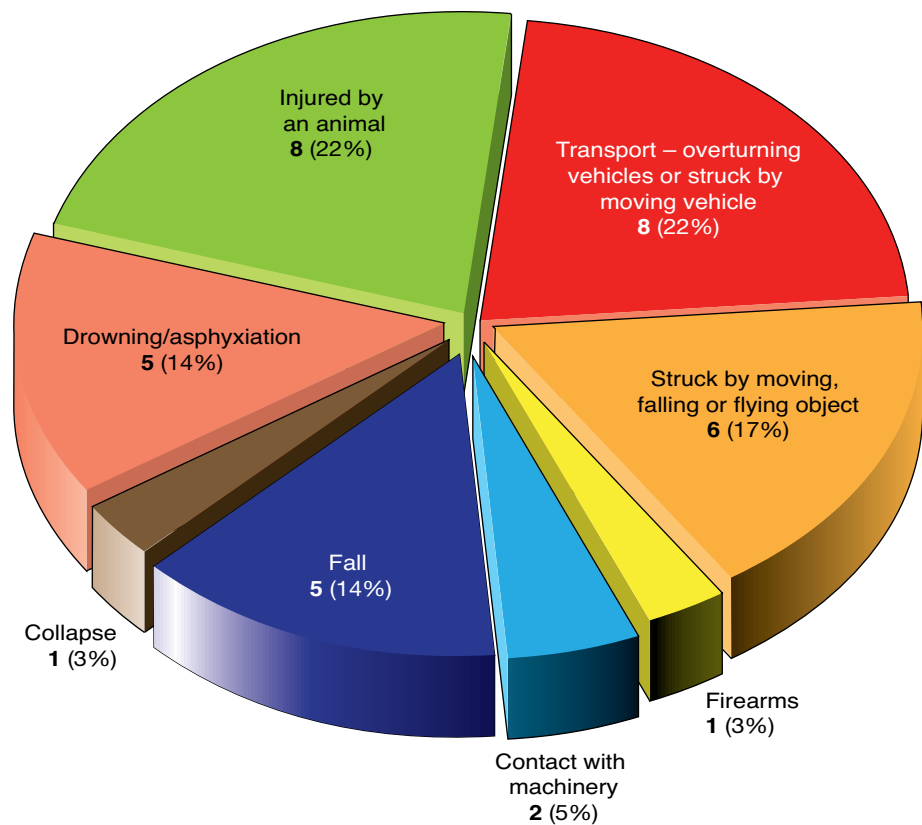
Three incidents involved grain bins/silos:

- A 21-year-old employee was cleaning grain in a grain silo when he sank and drowned in the moving grain; a 19-year-old farm worker was clearing a blockage when he sank into rapeseed; and a 61-year-old self-employed farmer was working in the grain store and later found by his son buried in grain.
- A 50-year-old farm worker was found drowned in dirty slurry water; and a 37-year-old self-employed farmer was found dead in the farm's underground slurry tank.

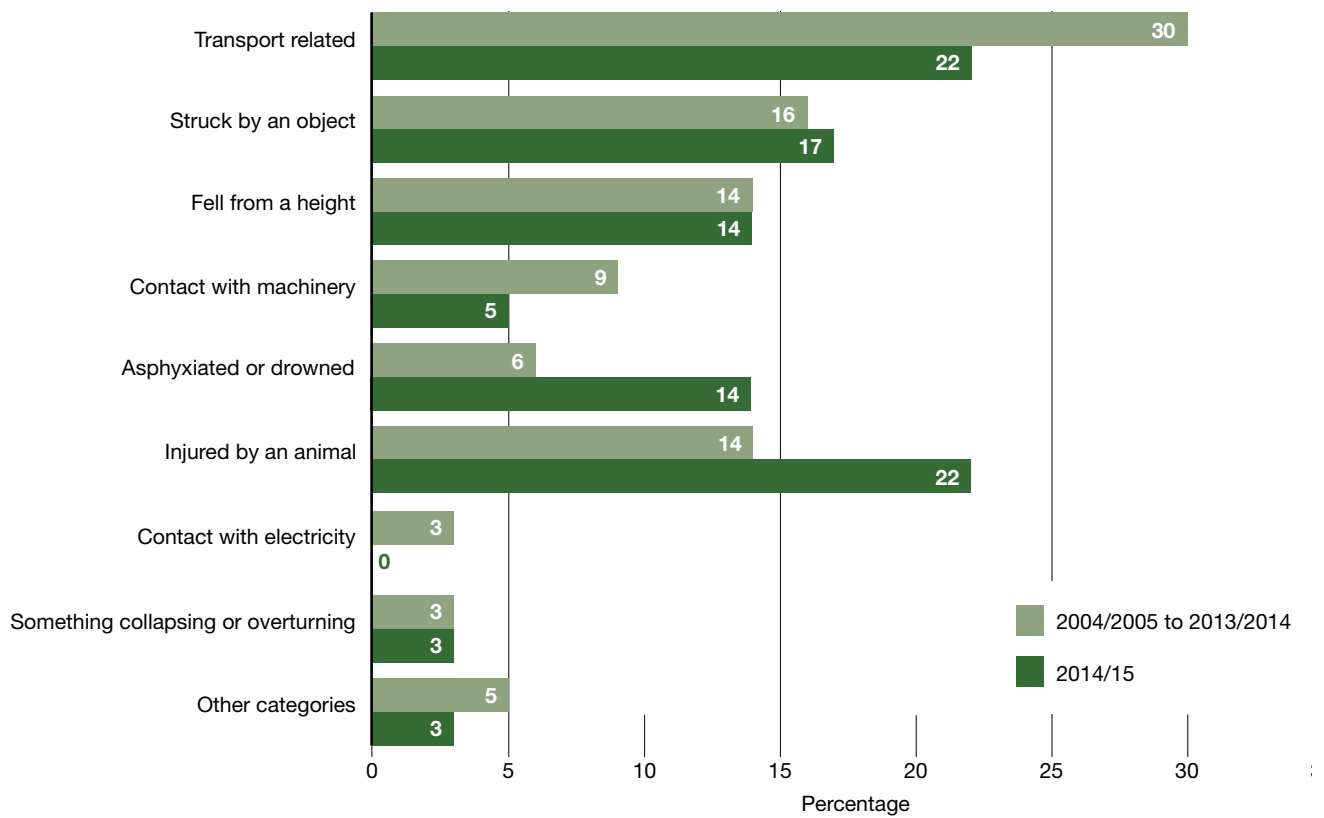
Machinery caused two deaths (5%).

- A 48-year-old self-employed contractor died when a chainsaw cut his neck and a 71-year-old self-employed farmer was trapped inside a potato-box-emptying machine.

The remaining two victims were a 72-year-old employee who died when a barn wall collapsed and 37-year-old gamekeeper who died from a gunshot wound.



**Figure 1** Fatal injuries by cause, 2014/15



**Figure 2** Fatal injuries by cause: Percentage in 2014/15 against previous 10 years (2004/05 to 2013/14)

**Table 4** Type of fatal injuries, 2014/15

<b>Transport (overturning vehicles or struck by moving vehicle)</b>	<b>8</b>
Tractor and trailer including farm equipment	3
ATV	3
Telescopic handler	2
<b>Injured by an animal</b>	<b>8</b>
Cows, calves and cattle	8
<b>Struck by moving, falling or flying object</b>	<b>6</b>
Tree/tree branch	2
Bales of straw/hay	1
Lorry tailgate	1
Tractor front loader	1
Metal object from flail hedge cutter	1
<b>Fell from a height</b>	<b>5</b>
Fragile roofs	3
Lorry	1
Ladder	1
<b>Drowning and asphyxiation</b>	<b>5</b>
Grain bins/silos	3
Slurry lagoon	1
Underground slurry tank	1
<b>Contact with machinery</b>	<b>2</b>
Chainsaw	1
Potato-box-emptying machine	1
<b>Something collapsing</b>	<b>1</b>
Barn wall	1
<b>Weapon</b>	<b>1</b>
Gun	1
<b>Total</b>	<b>36</b>

## Summary of fatalities by HSE division from 1 April 2014 to 31 March 2015

### *East and South East*

#### *East of England*

A 67-year-old employee was struck by a trailer tailgate. He was clearing rubbish from the farm's pig unit into a tipping trailer attached to a lorry tractor unit. He had climbed inside the trailer to push the tailgate open when it swung back and struck him on his head. He died from serious head injuries.

A 21-year-old employee died when he became trapped in moving grain. He had climbed down a ladder inside a grain bin to clean the inside. When he finished working at the top of the bin, his co-worker opened the panel at the bottom to start the grain flowing. The intention was to help reduce the grain level so that cleaning could be continued lower down the bin. The young worker then stood on the grain and shouted to his colleague to close the panel. As the flow of grain stopped he was heard shouting for help. He sank into the grain and died from asphyxiation.

#### *South East*

A 72-year-old employee was crushed to death when a wall collapsed. He was working on a partially collapsed barn roof removing tiles when the wooden side of the wall fell, pinning him against a brick wall. He died from serious crush injuries.

A 52-year-old self-employed contractor was struck by the tree that he was felling with his chainsaw. His son was using a rope to control the direction of the fall when the tree split and fell back crushing him underneath.

### *Wales and South West*

#### *Wales*

A 71-year-old self-employed farmer was killed when his quad bike overturned on top of a steep field. He had been spraying nettles on his quad bike when the bike clipped a tree stump and overturned. He had not received any training and was not wearing a helmet. His nephew later found him in the field with the bike rolled over on top of him.

A 57-year-old employee died when he fell from the back of a lorry. He was in the field helping a farmer to stack hay bales by hand onto a trailer. According to the farmer he had been leaning forward to take a bale from him when he fell to the ground head first. He received serious head injuries and later died in hospital.

A 43-year-old employee was run over by a reversing telehandler in the farmyard. The farmer had left the telehandler running to go inside the farmhouse but then returned to load animal feed into a parked trailer. It is assumed that the worker was either standing close somewhere behind the telehandler or walking past it when he was struck and run over by the machine as it manoeuvred. He was crushed between the front and rear wheels.

A 48-year-old self-employed contractor died when his chainsaw cut his neck. He was attempting to cut down an overhanging tree branch using a work platform fixed to the front of a tractor. The intention was to erect a stock fence in a field so he needed to create some space to use a mechanical post knocker. He received serious injuries to his face, neck and chest when he slipped and fell and came into contact with the chainsaw.



### ***South West***

A 68-year-old self-employed farmer was knocked over by cattle. He was handling and moving a number of cows and calves onto a lorry when he was knocked over by the cattle. He fell backwards onto a concrete floor and died from serious head injuries.

A 25-year-old farm worker was killed when a tractor and silage trailer overturned. He was driving the tractor and trailer loaded with grass down a steep slope along a field. It is assumed that he lost control of the tractor causing the combination to go through a hedge, down a steep embankment and then onto the road. The tractor and trailer overturned. He died from serious crush injuries.

A 72-year-old retired farmer was run over by a reversing tractor-mounted turf cutter. He was sitting in the side doorway of a van loaded with turf cuttings while his son operated the cutter. For some unknown reason he stood up, approached the machine and made contact with the back of the turf cutter's pallet carrier as it reversed. He was taken to hospital with abdominal and chest injuries but later died.

A 50-year-old farm worker was found drowned in a dirty water lagoon. He was clearing out material from a pit into a dirty water lagoon using a telehandler. There were no witnesses but it is assumed that he had extended the telehandler boom to empty the contents of the bucket into the lagoon, when he lost control of the machine. The machine went through the lagoon fence and ended up submerged in the dirty slurry water. He was found drowned inside the cab.

A 64-year-old self-employed farmer was found trapped underneath an ATV. There were no witnesses, but it is assumed that he was riding the bike on open moorland when it overturned and trapped him underneath. He died from crush injuries.

### ***Midlands***

#### ***Marches***

A 63-year-old member of the public was attacked by a group of cows, calves and a bull. He and his wife were walking their dogs on a public right of way across a field when he was attacked and knocked to the ground. He got up, but was knocked and head butted by the herd. He died from chest injuries.

A 67-year-old farm worker died when he fell through a fragile roof. He had been removing asbestos sheets from a barn roof when the area of the roof collapsed and he fell through onto the concrete floor below. He died from multiple head injuries.

A 62-year-old self-employed farmer was kicked by a cow. He was moving cattle into a cattle lorry trailer when one of them turned back on the ramp and kicked him in his chest and neck. He fell against the rails and later died in hospital from injuries caused by the blow to his neck.

A 20-year-old farm worker was crushed underneath a telehandler. He was removing a section of a felled tree from a steep muddy slope using a telehandler when he lost control of the machine. He tried to leave the vehicle cab but was trapped underneath the machine as it rolled over completely onto its side. He died from crush injuries.

#### ***East Midlands***

A 67-year-old self-employed farmer was found dead in a feed manger. He had intended to fetch his cows from the yard for the evening milking but didn't return to the parlour. His wife decided to help out but found him unconscious lying on his

back in the feed manger. There were no witnesses and it is assumed that he was injured by the bull or cattle seen nearby. He died from crush injuries to his chest consistent with having been knocked over by cattle.

#### ***North Midlands***

A 71-year-old self-employed farmer was trapped in a potato-box-emptying machine. He was moving loose potatoes from a box tipper onto a grading line conveyor through an open hydraulic-powered gate. The machine started a cycle assuming that a box was present and closed the gate. He died from serious injuries as the gate trapped his neck inside the machine.

A 57-year-old farm worker was trampled to death by a cow. He had entered a calving pen to check the birth of a newborn calf when the cow knocked him to the ground and trampled him to death.

A 79-year-old self-employed farmer was trampled to death by cattle. He had left the farmhouse and had not returned as planned. His wife and neighbour went looking for him in the field and found him collapsed. There were no witnesses, but it is assumed that he had fallen or was knocked over by cattle and was unable to get back up. He died from injuries consistent with having been trampled by cattle.

A 61-year-old member of the public was trampled to death by cattle. There were no witnesses and it is assumed that he was walking his dog across a footpath in a field with a bull, cows and calves present. He died from injuries consistent with having been trampled by cattle.

A 73-year-old member of the public was struck by a metal object that came from a tractor-mounted rotary flail hedge cutter. He was standing near the hedge cutter while it was cutting a hedge. It is assumed that the cutter caught barbed wire, causing metal fragments to eject from the machine, puncturing his lower neck. He died as a result of impaired breathing and loss of blood.

#### ***Yorkshire and North East***

##### ***Yorkshire***

A 72-year-old worker was killed when his side-by-side ATV overturned. He was spraying weeds on the edge of a bank using a hand-held lance when he lost control of the vehicle causing it to roll down the slope. He was not wearing a seat belt and had not received any training. He was thrown out of the vehicle as it rolled over down the embankment. The vehicle landed on top of him at the bottom of the slope, crushing him underneath.

A 58-year-old self-employed contractor was struck by a tree branch. He was felling a tree when a branch caught another tree and then snapped and struck him on his head. He later died in hospital from severe head injuries.

##### ***North East***

A 67-year-old self-employed farmer died when he fell through a fragile barn roof. He had left the farmhouse to clear moss from a barn gutter. There were no witnesses but it is assumed that he was on the fragile roof when it collapsed and he fell through onto the concrete floor below. He was discovered later by his daughter who found him on the floor. He had died from serious head injuries.

##### ***North West***

A 37-year-old self-employed farmer was found dead in the farm's underground slurry tank. He had been working with others, to spread slurry on the fields. The slurry was stored in a large tank above the ground that was discharged into a

second tank below the ground from where it was pumped into machines for spreading. The underground slurry tank had an opening. The metal covers for the tank may have been fully or partially removed. There were no witnesses to confirm how he ended up in the tank. It is possible that he fell in or was overcome by slurry gas and then fell into the tank and drowned.

### ***Scotland***

A 37-year-old gamekeeper was found dead near the top of a field with a gunshot wound. There were no witnesses but it is assumed that he had attempted to remove the rifle from his vehicle and accidentally discharged the gun. He was found dead lying on the ground with a gunshot wound to his head.

A 79-year-old self-employed farmer died when he fell from a ladder. He was repairing his hay shed from a ladder. There were no witnesses but it is assumed that he may have been either using the ladder to go up or down, or carrying out repair work on the ladder when he fell to the ground. He was discovered by his neighbour lying on the ground near to the ladder with serious injuries.

A 19-year-old farm worker was engulfed by rapeseed inside a storage silo. He was clearing a blockage inside the silo using a metal pole (with the silo discharge machine running) when he got into some difficulty and became submerged by rapeseed. Several attempts were made by other workers to rescue him but he sank further into the rapeseed. He died from asphyxiation.

A 68-year-old self-employed farmer died when he fell through a fragile roof. He was repairing a barn roof when he fell through the roof onto a concrete floor below. He died from serious head injuries.

An 80-year-old self-employed farmer was crushed by a tractor against a tree. He was removing plastic wrapping from a bale attached to the tractor's front end loader to feed stock in a field. He had not applied the parking brake. There were no witnesses but it is assumed that he attempted to climb into the cab to stop the tractor moving or it started to move when he attempted to enter the cab. The tractor rolled down a slope in the field and as he was unable to re-enter the cab the tractor crushed him against a tree. He died from serious crush injuries.

A 79-year-old self-employed farmer was struck by a falling hay bale. He had been working alone in a shed moving hay bales into temporary storage and was found lying on the floor with a leg injury. He had told his son that he had placed two bales in the tractor shed (one on top of the other) and had got out of his tractor when the upper bale fell, knocking him over. He was taken to hospital but later died from complications caused by the injury.

A 46-year-old self-employed farmer was trapped between a front loader and a tractor. He was working on his tractor with the bucket raised when the loader fell. A close inspection of the machine found that he had discounted the hydraulic hose between the loader and the tractor, causing the lifting frame (loader arm) to drop, crushing him underneath. He died from serious crush injuries.

A 62-year-old self-employed farmer was attacked by a cow. She had entered a cattle pen to check on a cow that was about to give birth. As she stepped into the pen, a cow became frightened and pinned her against the rails. The cow then went through the rails with both feet and struck the farmer several times in the face and chest. She was eventually rescued by her husband (who was also attacked by the cow) but died shortly afterwards from serious injuries.

A 61-year-old self-employed farmer died when he fell into a grain bin. He was working in the grain storage area cleaning the rafters above the grain dryer and was missing for a while. His son decided to search around the farm but could not find him. He noticed that the grain store machinery was still running and grain was being transferred from the bins to the grain store. After searching everywhere he decided to search inside the grain bin itself with a shovel and found his father buried in the grain.

**Table 5** Number of fatal injuries by HSE Division, 2014/15

HSE division	Counties and unitary authorities (UAs)	Number
<b>East and South East</b>	Bedfordshire, Berkshire, Buckinghamshire, Cambridgeshire, Essex, Hampshire, Hertfordshire, Isle of Wight, Norfolk, Suffolk, Oxfordshire, Kent, East and West Sussex, Surrey	<b>4</b>
East of England	Essex, Norfolk, Suffolk	2
South East	East Sussex, Kent, Oxfordshire, Surrey, West Sussex, Berkshire, Hampshire, Cambridgeshire, Bedfordshire	2
<b>Wales and South West</b>		<b>9</b>
Wales	All Wales UAs	4
South West	Cornwall, Devon, Somerset, North Somerset, Bath and North East Somerset, Gloucestershire, South Gloucestershire, Bristol, Dorset, Swindon and Wiltshire	5
<b>Midlands</b>	West Midlands, Leicestershire, Northamptonshire, Warwickshire, Derbyshire, Lincolnshire, Nottinghamshire, Hereford and Worcester	<b>10</b>
Marches	Staffordshire, Herefordshire and Worcestershire	4
East Midlands	Leicestershire, Northamptonshire, Warwickshire	1
North Midlands	Derbyshire, Lincolnshire, Nottinghamshire	5
<b>Yorkshire and North East</b>	Cleveland, Durham, North Yorkshire, Northumberland, West Yorkshire, Tyne and Wear, Humberside and South Yorkshire	<b>3</b>
Yorkshire	North Yorkshire, West Yorkshire, South Yorkshire and Yorkshire (East Riding)	2
North East	Durham, Northumberland and Tyne and Wear	3
<b>North West</b>	Cheshire, Cumbria, Greater Manchester, Lancashire and Merseyside	<b>1</b>
<b>Scotland</b>	All Scottish UAs and island councils	<b>9</b>
<b>Total</b>		<b>36</b>

# Part Two: Fatal injuries in the agricultural sector 2004/05 to 2013/14

Part Two of this report provides a detailed breakdown and summary of the causes of fatalities over the 10-year period 2004/05 to 2013/14. It also provides a comparison between 2014/15 and the previous ten years.

## Summary

Four hundred and four (404) fatalities in agriculture (including farming, forestry, arboriculture, horticulture, fish farming etc) were reported to HSE between 2004/05 and 2013/14. Of these, 130 (32%) were to employees, 221 (55%) were to self-employed people and 53 (13%) were to members of the public who were killed as a result of someone else's work activity.

Over the same period 16 children (under 16 years of age) were killed (included in Tables 13-16).

This means that:

- on average over the past ten years, nearly one person a week had been killed as a direct result of an agricultural work activity;
- most of the people killed were self-employed; and
- thirty percent (30%) of the reported fatalities to members of the public involved children.

See Tables 6-16 for further information.

## Employees and self-employed people

There were 13 fatal injuries to employees in 2014/15, 3 more than the previous year. In all, a total of 130 employees were killed over the past 10 years; an average of 13 deaths a year.

There were 19 fatal injuries to self-employed people in 2014/15, 2 more than the previous year. In all, a total of 221 self-employed people were killed over the past 10 years; an average of 22 deaths per year.

The combined total of 32 workers (ie employees and self-employed people) killed in agriculture during 2014/15 is an increase of 5 from the previous year.

Over a 10-year period (2004/05 to 2013/14), 351 workers were killed; of whom 130 (37%) were employees and 221 (63%) were self-employed.

See Table 10 for more information.

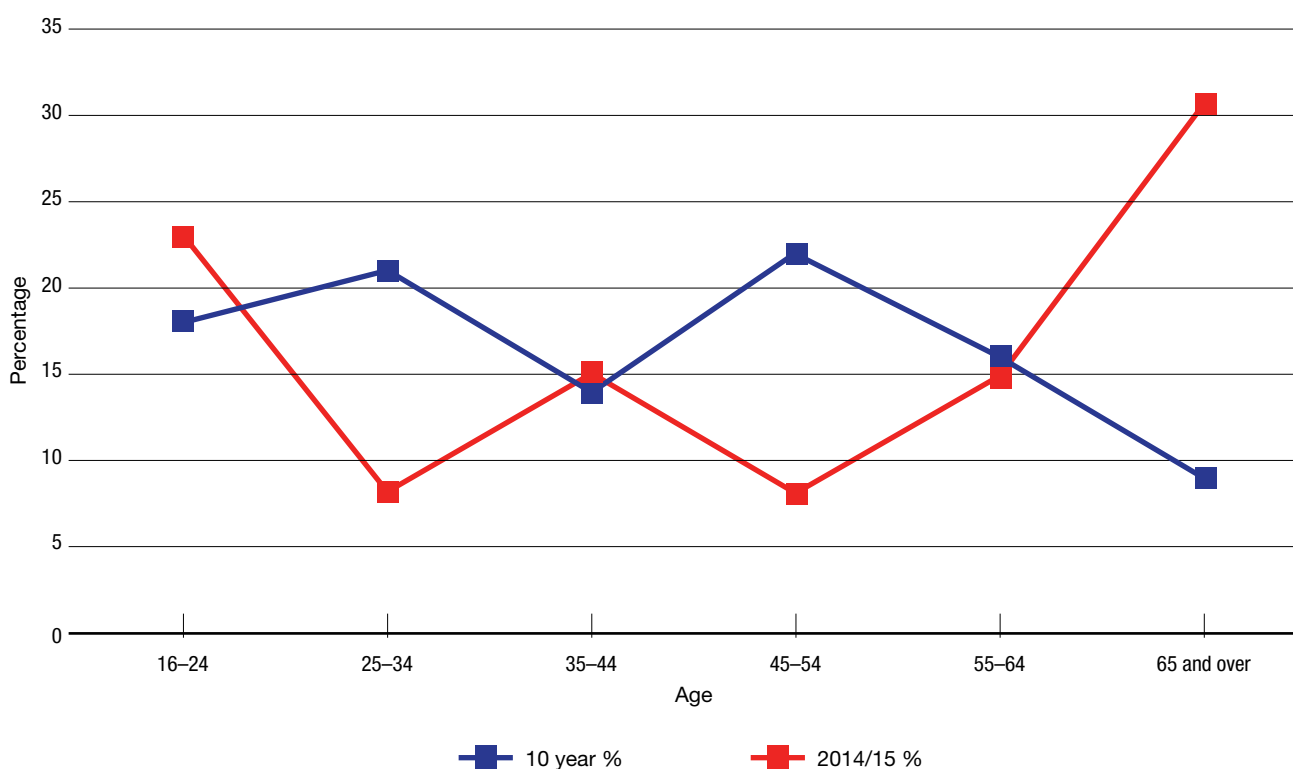
**Age (employees and self-employed) over a 10-year period**

Deaths to workers (employees and the self-employed) in agriculture aged 65 years and over and between 55 and 64 remain high, while deaths to those aged 24 years or less remain low in comparison with other industrial sectors. In 2014/15 10 (53%) of self-employed workers were over the age of 65. Of the 351 workers killed (over a 10-year period 2004/05 to 2013/14), 80 (23%) were between 55 and 64 and 92 (26%) were over 65 years of age, compared with 28 (8%) under 25.

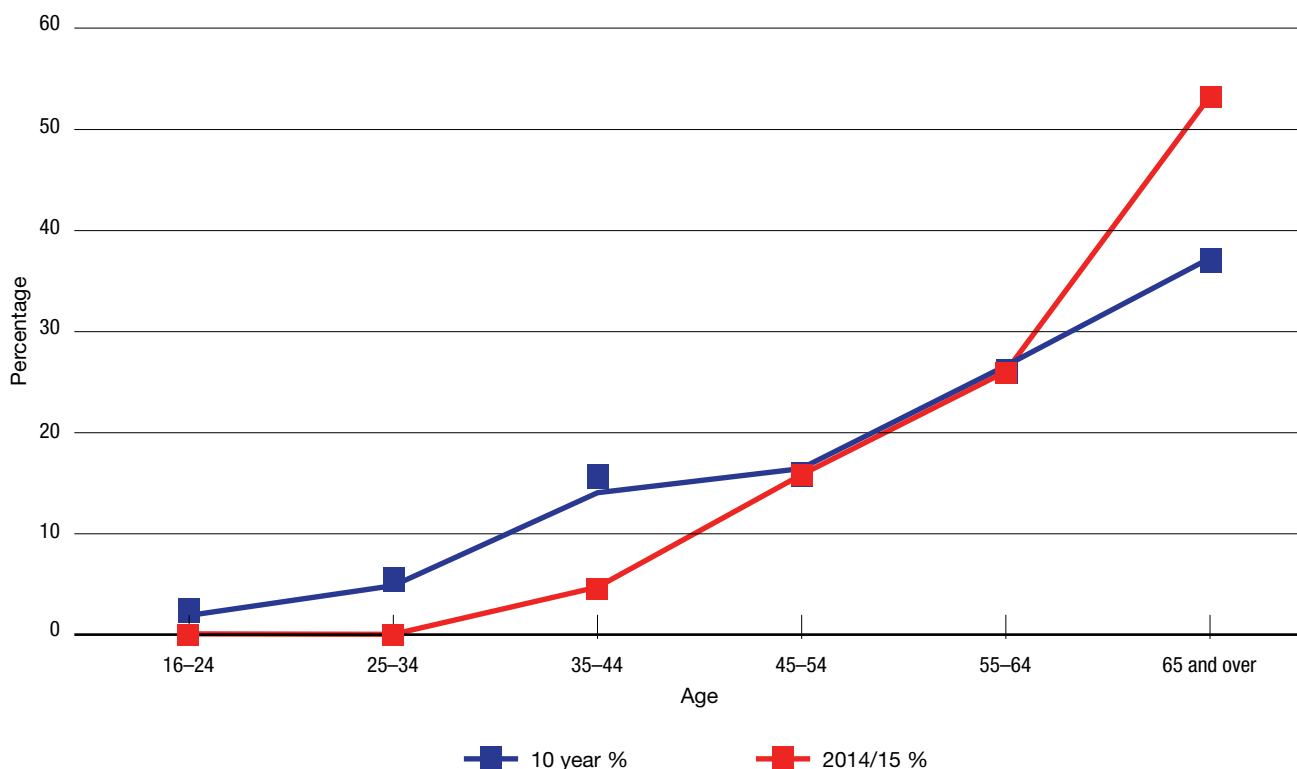
Many of the self-employed who died were over 65 years of age – representing 36% of all reported fatalities to the self-employed. Over half the self-employed deaths, ie 139 in total, were to those aged 55 years and over compared with five under 24. During 2014/15, 79% of the self-employed deaths occurred to those over the age of 55.

For employees, those aged 45-54; 25-34 and 55-64 years had the largest proportion of fatal injuries. The lowest figures were for those under 19 and 65 years and over. During 2014/15, 31% of employees were over the age of 65.

See Figures 3(a) and 3(b) and Table 10 for further analyses of fatal injuries by age.



**Figure 3(a)** Age of deceased. Percentage of the total for employees – 2014/15 against 10-year period (2004/05 to 2014/15)



**Figure 3(b)** Age of deceased. Percentage of the total for self-employed – 2014/15 against 10-year period (2004/05 to 2014/15)

### **Kind of injury (employees and self-employed) over a 10-year period**

The three main causes of fatal injuries to workers in agriculture over the past ten years were:

- transport – being struck by a moving vehicle/overtuns (30% of all fatalities);
- struck by moving or falling objects (17%); and
- falls from a height (14% of all fatalities).

Other causes included:

- injury by an animal (11%);
- contact with machinery or material being machined (10%);
- asphyxiation or drowning (6%);
- contact with electricity or an electrical discharge (4%);
- trapped by something collapsing or overturning (3%).

See Table 6 for more information on kind of injury.

### **Cause of injury (employees and self-employed) over a 10-year period**

The largest cause of fatal injuries in agriculture continues to be workplace transport. Transport was involved in 106 deaths (30%) over the 10-year period.

In particular:

- being struck by moving vehicles, trapped in between vehicles, vehicles overturning etc accounted for most of the 106 deaths (30%) of the combined total fatalities;

- being struck by a tractor was the most common cause of fatal injuries to workers (including the self-employed) resulting in 39 deaths. Of these, 23 were to the self-employed and 16 involved employees.

Being struck by a moving, falling or flying object accounted for 59 deaths (17%); 19 of which were caused by falling branches/trees and nine from material being lifted or lifting equipment. A further 7 were caused by moving or falling bales of hay.

Falls from heights accounted for 49 deaths (14%). The two most common causes were falling through fragile roofing materials (26 deaths) and falls from lifting equipment or moveable ladders – 7 deaths in total.

Animals caused a further 40 deaths (11%) of which 15 (38%) involved a bull and 24 (60%) cattle.

### ***Cause of injury (employees) over a 10-year period***

Amongst employees, the most common cause of death was being struck by a tractor – accounting for 16 deaths. Other common categories of vehicle deaths were ATVs (12 deaths), and telescopic material handlers/loaders (4 deaths).

Struck by moving, falling or flying objects caused 19 deaths, of which 10 were struck by a tree or a tree branch.

A further 16 were as a result of asphyxiation/drowning, of which 7 were in water.

In the other categories, falls from a height caused 13 deaths, machinery was involved in 11 deaths, and contact with electricity 9 deaths. Trapped by something collapsing or overturning caused 6 deaths and farm animals 5.

### ***Cause of injury (self-employed) over a 10-year period***

Amongst the self-employed, the most common cause of death was also transport. Struck by a moving or overturned tractor accounted for 23 deaths. ATVs were involved in 11 deaths and a further 8 were caused by fork lift trucks/telehandlers or loaders.

Falls from a fragile roof also caused a further 23 deaths. Overall falls from a height caused 36 deaths. Farm animals caused 35 deaths of which 14 were bulls and 21 involved cattle. Machinery was involved in a further 24 deaths.

Struck by a moving, falling or flying object caused a combined overall death of 40, of which 9 were by trees/tree branches and 6 involved moving or falling bales of hay.

Other significant causes include trapped by something collapsing or overturning, and asphyxiation or drowning resulting in 6 deaths (each) and electrocutions by overhead power lines 4 deaths.

See Table 7 for more information about causation.

### ***Nature and site of injury (employees and the self-employed) over a 10-year period***

A detailed breakdown in the nature and site of injury that had resulted in a death is provided in Tables 8 and 9.



**Month (employees and the self-employed) over a 10-year period**

The highest number of deaths to the employed and self-employed during the 10-year period were in August (45) followed by September (37).

The comparatively larger numbers during the summer period reflects the level of activity in the arable sector associated with harvesting and autumn cultivation. The lowest number of deaths occurred in November (21) and December (22).

See Table 12 for a more detailed breakdown by month.

**Table 6** Fatal injuries to employees and the self-employed in agriculture, 2004/05 to 2013/14

Kind of incident	Employees	Self-employed	Total numbers	Percentage
Transport – struck by moving vehicle	44	62	106	30%
Struck by moving (including flying or falling) object	19	40	59	17%
Fall from a height	13	36	49	14%
Injury by an animal	5	35	40	11%
Contact with machinery or material being machined	11	24	35	10%
Asphyxiation or drowning	16	6	22	6%
Contact with electricity or an electrical discharge	9	4	13	4%
Trapped by something collapsing or overturning	6	6	12	3%
Other categories (including struck against something fixed or stationary; slip, trip or fall on the same level; exposure or contact with a harmful substance and fire)	7	8	15	5%
<b>Total</b>	<b>130</b>	<b>221</b>	<b>351</b>	<b>100%</b>

**Table 7** Fatal injuries to employees and self-employed in agriculture, 2004/05 to 2013/14

More detailed breakdown by type of incident	Employees	Self-employed	Total
<b>Struck by moving vehicle</b>	<b>44</b>	<b>62</b>	<b>106</b>
Tractor	16	23	39
All-terrain vehicles (ATVs)	12	11	23
Fork lift truck/telescopic handler/loader	4	8	12
Trailer, plant or equipment associated with vehicle	4	5	9
From transport of any kind	8	15	23
<b>Struck by moving, falling or flying object</b>	<b>19</b>	<b>40</b>	<b>59</b>
By a tree/tree branch	10	9	19
Material being lifted or lifting equipment	6	3	9
From moving or falling bales of hay	1	6	7
From shelf, table or stacking	2	4	6
From part of a building or structure	0	4	4
Other	0	14	14
<b>Fall from a height</b>	<b>13</b>	<b>36</b>	<b>49</b>
Fragile roof	3	23	26
From any man-lifting equipment	2	2	4
Moveable ladder	0	3	3
From a tree	1	2	3
From a vehicle	1	1	2
From stacked material	1	1	2
From gangways, roof edge or other means of access including structures and buildings	0	2	2
Other	5	2	7
<b>Injury from an animal</b>	<b>5</b>	<b>35</b>	<b>40</b>
Bulls	1	14	15
Other cattle and cows	3	21	24
Horses	1	0	1
<b>Contact with machinery</b>	<b>11</b>	<b>24</b>	<b>35</b>
Combine harvesters	1	4	5
Chainsaws	0	4	4

**Table 7** Fatal injuries to employees and self-employed in agriculture, 2004/05 to 2013/14  
(continued)

More detailed breakdown by type of incident	Employees	Self-employed	Total
Other (including bale handlers, bale choppers, hay turners, balers, etc)	5	10	15
Other attached powered machinery	5	6	11
<b>Asphyxiation/drowning</b>	<b>16</b>	<b>6</b>	<b>22</b>
Water	7	5	12
Grain	1	0	1
Other including oxygen deficiency	8	1	9
<b>Contact with electricity</b>	<b>9</b>	<b>4</b>	<b>13</b>
Overhead power lines	6	4	10
Handtools	1	0	1
Other	2	0	2
<b>Trapped by something collapsing or overturning</b>	<b>6</b>	<b>6</b>	<b>12</b>
Plant including lifting machinery and equipment	0	3	3
Building or structures	1	0	1
Bales of hay	2	0	2
Other	3	3	6
<b>Struck against something fixed or stationary</b>	<b>3</b>	<b>1</b>	<b>4</b>
<b>Exposure to or contact with harmful or hot substance</b>	<b>1</b>	<b>3</b>	<b>4</b>
Entry into confined space	0	1	1
Spillage of some substance	1	0	1
Other	0	2	2
<b>Slip, trip or fall on same level</b>	<b>0</b>	<b>2</b>	<b>2</b>
<b>Fire</b>	<b>1</b>	<b>0</b>	<b>1</b>
<b>Other kinds of incident</b>	<b>2</b>	<b>2</b>	<b>4</b>
<b>Total</b>	<b>130</b>	<b>221</b>	<b>351</b>

**Table 8** Fatal injuries to employees and the self-employed in agriculture, 2004/05 to 2013/14

Nature of injury	Employees	Self-employed	Total
Crushings and contusions	8	27	35
Concussion and internal injuries	11	26	37
Fractures	4	20	24
Asphyxiation, poisoning and gassing	14	11	25
Injury caused by electricity	8	3	11
Multiple injury types	28	47	75
Other known	27	51	78
Unknown	30	36	66
<b>Total</b>	<b>130</b>	<b>221</b>	<b>351</b>

**Table 9** Fatal injuries to employees and self-employed in agriculture, 2004/05 to 2013/14

Site of injury	Employees	Self-employed	Total
Head	25	47	72
Neck	4	5	9
Back	0	2	2
Trunk	10	22	32
Torso (multiple site)	1	3	4
Upper limb	1	2	3
Lower limb	1	2	3
Several of the above	27	45	72
General locations (including drowning, asphyxiation, electrocution etc)	34	52	86
Other/unspecified locations	27	41	68
<b>Total</b>	<b>130</b>	<b>221</b>	<b>351</b>

**Table 10** Fatal injuries to employees and the self-employed in agriculture, 2004/05 to 2013/14

Age	Employees	Self-employed	Total
16-19	7	2	9
20-24	16	3	19
25-34	27	12	39
35-44	18	30	48
45-54	28	33	61
55-64	21	59	80
65 and over	12	80	92
Age not known	1	2	3
<b>Total</b>	<b>130</b>	<b>221</b>	<b>351</b>

**Table 11** Fatal injuries to employees and the self-employed in agriculture, 2004/05 to 2013/14

Age	Total workers (employed and self-employed) by year										
	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	Total
16-19	1	0	2	2	0	1	0	3	0	0	9
20-24	4	2	1	2	3	2	0	1	2	2	19
25-34	6	0	4	7	1	5	3	7	4	2	39
35-44	2	8	7	5	6	3	5	3	4	5	48
45-54	8	8	6	7	6	8	6	2	5	5	61
55-64	11	9	6	6	5	13	12	8	6	4	80
65 and over	10	6	8	17	5	6	10	11	10	9	92
Age not known	0	1	2	0	0	0	0	0	0	0	3
<b>Total</b>	<b>42</b>	<b>34</b>	<b>36</b>	<b>46</b>	<b>26</b>	<b>38</b>	<b>36</b>	<b>35</b>	<b>31</b>	<b>31</b>	<b>351</b>

**Table 12** Fatal injuries to employees and the self-employed in agriculture, 2004/05 to 2013/14

Month	Employees	Self-employed	Total
April	9	19	28
May	12	14	26
June	11	15	26
July	18	17	35
August	16	29	45
September	12	25	37
October	13	16	29
November	7	14	21
December	6	21	27
January	6	16	22
February	9	16	25
March	11	19	30
<b>Total</b>	<b>130</b>	<b>221</b>	<b>351</b>

### Members of the public, 2004/2005 to 2013/14

Fifty-three (53) members of the public, including 16 children (aged under 16 years) died as a result of an agricultural work activity during the 10-year period.

The main cause of death to members of the public was being injured by an animal (32%) or as a result of being struck by a moving vehicle (26%). However, no children were killed by animals but 64% of the transport-related deaths to members of the public were to children.

Nine children died as a result of being struck by a moving vehicle (56% of all child fatalities). A further 2 each were as a result of asphyxiation or drowning and falls from a height.

Of the 16 child deaths, those aged between 1 and 5 were most at risk. Six children (37% of the total) were within this age group. The remaining child deaths were between 6 and 10 and 11 and 15 years of age (five deaths each).

The main cause of fatal injuries to adult members of the public was being injured by an animal (17 deaths) followed by struck by a moving, flying or falling object (6 deaths) and fall from a height and transport (5 deaths each).

Nineteen (19) fatalities (36%) involved elderly members of the public, ie people who were over the age of 65. This relates to 51% of the total adult deaths.

More adults died during August and September than in any other month. Of the 37 deaths to adult members of the public, 8 occurred in August and September (22% each).

See Tables 13-16 for more information on fatal injuries to members of the public.

**Table 13** Summary of fatal injuries to members of the public in agriculture, 2004/05 to 2013/14

Year of fatal injury	Members of the public	... Of which were children
2004/05	3	0
2005/06	8	3
2006/07	7	4
2007/08	2	0
2008/09	4	0
2009/10	5	3
2010/11	8	3
2011/12	6	0
2012/13	6	1
2013/14	4	2
<b>Total</b>	<b>53</b>	<b>16</b>

**Table 14** Summary of fatal injuries to members of the public in agriculture, 2004/05 to 2013/14 (age)

Age of injured person	Members of the public
1-5	6
6-10	5
11-15	5
16-19	1
20-64	17
Over 65	19
<b>Total</b>	<b>53</b>

**Table 15** Summary of fatal injuries to members of the public in agriculture, 2004/05 to 2013/14 (cause)

Kind of incident	Members of the public	... Of which were children
Transport: struck by moving vehicle	14	9
Injury by an animal	17	0
Fall from a height	7	2
Struck by moving, flying or falling object	7	1
Asphyxiation or drowning	4	2
Contact with machinery	1	0
Strike against something fixed	1	1
Exposure or contact with harmful or hot substance	1	1
Slip or trip on same level	1	0
<b>Total</b>	<b>53</b>	<b>16</b>

**Table 16** Summary of fatal injuries to members of the public in agriculture, 2004/05 to 2013/14 (month)

Month	Members of the public	... Of which were children
April	1	0
May	4	2
June	5	1
July	9	3
August	10	2
September	10	2
October	4	2
November	4	1
December	2	1
January	1	0
February	1	0
March	2	2
<b>Total</b>	<b>53</b>	<b>16</b>



## Part Three: Costs of workplace injuries and fatalities in farming, forestry and horticulture 2013/14

Workplace fatal (and non-fatal) injuries impose costs on society. As well as the financial costs from these cases (for example in terms of lost production and healthcare costs), these cases impose human costs (in terms of loss of life and for non-fatal injuries the impact on the individual's quality of life). The total economic cost of workplace injuries includes both the financial costs incurred and a valuation of the human costs.

***Latest Great Britain (GB) estimates show that workplace fatal injuries in the agriculture sector cost society an estimated £44 million in 2013/14 (expressed in 2013 prices).\****

*Source: HSE Cost to Britain model*

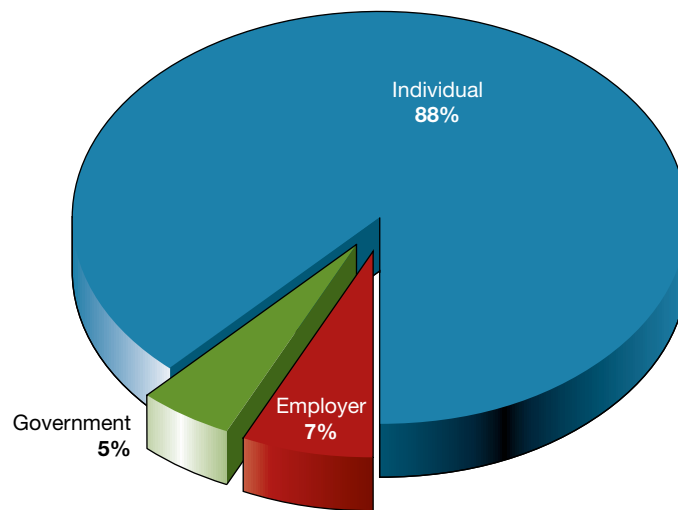
The cost of workplace fatal injuries falls to 3 distinct groups: individuals, employers and government/taxpayers. Looking at how the 2013/14 workplace fatal injury cost in the Agriculture sector breaks down between these groups, nearly 90% of the costs fall to the individual, mainly due to the impact of lost income and the human cost associated with loss of life. The remaining cost is split between employers and government.

This distribution of costs by cost bearer is useful in understanding the incentives operating on each of these groups with respect to taking risk control measures (when considered alongside the costs of implementing these measures) and is an important consideration when determining the case for government intervention to address workplace health and safety risks.

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\* Costs are calculated using three-year averages of incidence data. Therefore the latest cost figures available refer to 2013/14 rather than 2014/15 as with other incidence data within this report. The number of fatal injuries is based on the annual average number of fatal injuries in 2012/13–2014/15 reported under the Reporting of Injuries, Diseases and Dangerous Occurrence Regulations (RIDDOR); the number of non-fatal injuries is based on the average annual number of injury cases for 2012/13–2014/15 estimated from self-reports in the Labour Force Survey (LFS).

**Breakdown of fatal injury costs by cost bearer**

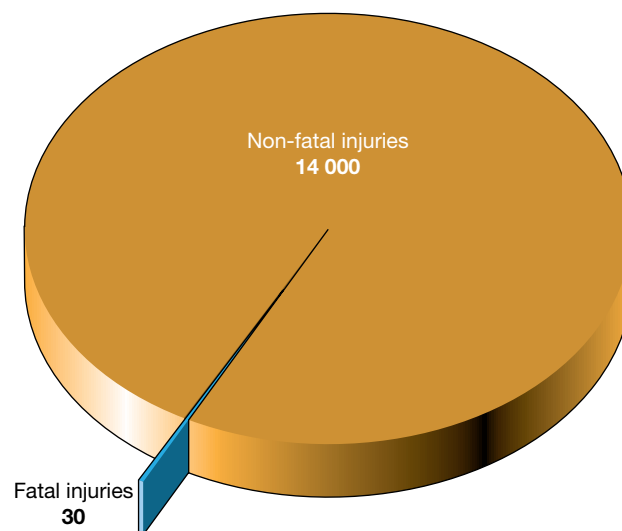


Source: HSE Cost to Britain model

Whilst fatal injuries account for only a small proportion of total injury (fatal and non-fatal) cases in the sector (less than 1%), their contribution to total injury costs is much greater.

The total cost to society of workplace injuries (both fatal and non-fatal) in the agriculture sector is estimated as between **£85 m** and **£170 m**, with a central estimate of £127 m in 2013/14. Fatal injuries account for between around a quarter and a half of the total injury cost, with a central estimate of about a third.

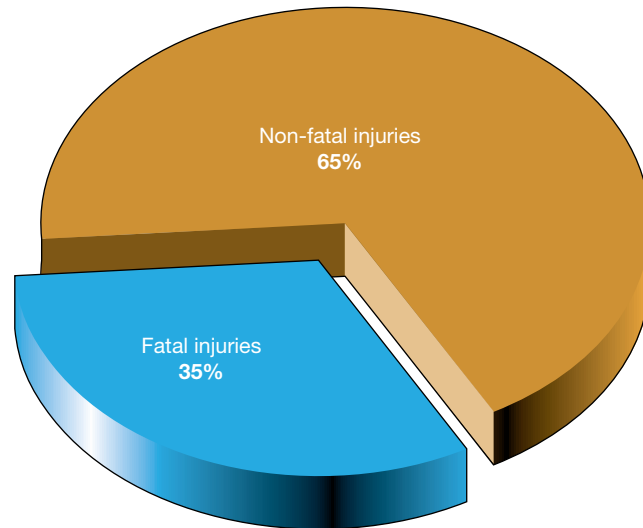
**Breakdown of injury cases by type of incident**



Source: Fatal injuries, RIDDOR annual average 2012/13-2014/15

**Non-fatal injuries, Labour Force Survey, annual average 2012/13-2014/15**

*Breakdown of injuries cost by type of incident*



*Source: HSE Cost to Britain model*

Figures may not match those produced elsewhere due to use of a three-year average.

For more details on the costs estimates and the methods, see [www.hse.gov.uk/statistics/cost.htm](http://www.hse.gov.uk/statistics/cost.htm).

For more details on workplace injury and illness in the agriculture sector, see [www.hse.gov.uk/statistics/industry/agriculture/index.htm](http://www.hse.gov.uk/statistics/industry/agriculture/index.htm).

# The presentation of statistics in this report

1 Part One of this report summarises the fatalities investigated by inspectors from the Health and Safety Executive (HSE), reported in the agricultural sector in GB between 1 April 2014 and 31 March 2015. The agriculture sector comprises: farming; horticulture; forestry; fish farming; and other associated land-based industries including arboriculture.

## **Data in Part One of this report is provisional and does not include investigations carried out by local authorities**

2 Part Two summarises fatal injuries notified to HSE within the agricultural sector in the 10-year period 2004/05 to 2013/14. 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.

3 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.

4 The figures published in Part One 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.

5 Although the number of fatal injuries reported in construction was higher, the incidence rate (expressed per 100 000 workers) in agriculture was the highest among the traditional industry sectors in GB in 2014/15. This continues to be a cause of concern for HSE; the Farm Safety Partnerships (FSP) in England, Scotland and Wales; the Agriculture Industry Advisory Committee (AIAC) and the industry itself. AIAC and FSP are kept informed about indicative statistics and incident trends so that, as the year unfolds, any emerging patterns of causation or seasonal trends can be shared with the industry to try to prevent further incidents. The situation is ever-changing and there is a balance between the speed of providing relevant information and the accuracy of this information.

6 For these reasons, the collective headline statistics recorded in this report are based only on investigations carried out by inspectors from HSE and so will differ from HSE's overall figures published over the previous ten years.

7 The reclassification to SIC2007 has affected many of the tables for the agriculture industry published on HSE's statistical website at [www.hse.gov.uk/statistics/index.htm](http://www.hse.gov.uk/statistics/index.htm). The impact on the statistics is different for fatal and non-fatal injuries. On the one hand, the risk to agricultural workers is higher than that to landscaping workers. On the other, we believe the level of reporting of non-fatal injury is higher in landscaping services than in agriculture. This results in an apparent increase in the agricultural fatal injury rate and a corresponding apparent decrease in the non-fatal injury rate.

8 However, because HSE's agriculture strategy has been developed to address the hazards and risks in the industry, defined as including both:

- traditional farming activities such as arable, dairy, livestock and mixed farming, the growing of fruit and vegetables, forestry, production horticulture, aquaculture, agricultural and animal husbandry services; and
- the wider land-based industries, including arboriculture, animal care (veterinary practices etc), environmental conservation etc.

Fatal injuries in arboriculture have been included in this report.

9 Following detailed analysis, HSE concluded that 37 people died in the industry in 2014/15. This happens when one or two deaths may occur in workplaces that are strongly agriculture related hence the fatal to a 20-year-old worker who died when a sprayer overturned into a lake at a resort in Wales (investigated and reported to the LA) has been included in HSE overall figures, but not this report.

10 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.

11 Part Two of this report provides a detailed breakdown and summary of the causes of fatalities over the 10-year period 2004/05 to 2013/14. It also provides a comparison between 2014/15 and the previous 10 years. However, changes to the industrial classification introduced in 2010 and reporting arrangements in September 2011 mean that data for this and subsequent years may not be directly comparable with that for 2009/10 to 2011/12 and earlier.

**12 Standard Industrial Classification (SIC):** HSE now uses the SIC 2007 classification scheme to define industries, rather than the SIC 2003 scheme used in previous years – see [www.hse.gov.uk/statistics/industry/sic2007.htm](http://www.hse.gov.uk/statistics/industry/sic2007.htm). The version used in these statistics is SIC 2007 which is the first major revision to the classification since 1992. Therefore, in theory, the new industry coding used by HSE has moved landscape activities from agriculture to the services sector. However, because HSE's Agriculture Strategy has been developed to address the hazards and risks in agriculture and the wider land-based industries and in particular arboriculture (tree work-related activities), arboriculture fatalities have been included in this section of the report.

13 **Employment data:** With the release of the Annual Statistics Report in November 2011, HSE changed its source of employment data to the Annual Population Survey (APS). The APS is a comprehensive single data source that provides HSE and others with insight into a wide range of working structures.

14 **RIDDOR definitions:** Some of the definitions in RIDDOR changed from April 2013 and the restructuring of information collected under the new RIDDOR reporting arrangements, introduced in September 2011, means that data for subsequent years may not be directly comparable.

15 **If you have any queries about this report, contact: The Health and Safety Executive's Agriculture, Waste and Recycling Sector on [agriculture@hse.gsi.gov.uk](mailto:agriculture@hse.gsi.gov.uk).**

## Further advice

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

Current guidance on health and safety in agriculture is available at [www.hse.gov.uk/agriculture](http://www.hse.gov.uk/agriculture) and about tree work at [www.hse.gov.uk/treework/index.htm](http://www.hse.gov.uk/treework/index.htm).

This report is available at: [www.hse.gov.uk/agriculture/resources/fatal.htm](http://www.hse.gov.uk/agriculture/resources/fatal.htm).

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