**Work Health and Safety in the Agricultural Industry**

**2016**



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# Introduction

The agricultural industry was identified as a priority industry in the Australian Work Health and Safety Strategy 2012–2022 (the Australian Strategy), which was developed through consultation with governments, industry, unions and the public. Priority industries were based on rates of injuries, diseases or fatalities, or the nature of hazards found in the industries. The aim of the Australian Strategy is to focus attention on priority industries so that causes of workplace injuries, diseases and fatalities can be identified and minimised through appropriate prevention strategies. This statistical report supports the objectives of the Australian Strategy by identifying the main risks faced by workers in the agricultural industry and highlighting areas within the industry that merit the greatest attention.

## Scope of the agricultural industry

The agricultural industry is comprised of businesses that are engaged in “the growing and cultivation of horticultural and other crops (excluding forestry), and the controlled breeding, raising or farming of animals (excluding aquaculture)” (ABS 2006).

The industry statistics collected by the Australian Bureau of Statistics (ABS) and Safe Work Australia are coded using the 2006 Australian and New Zealand Standard Industrial Classification (ANZSIC). The classification system includes multiple agricultural subdivisions within the high-level group of “agriculture, forestry and fishing”. For this report, the agricultural subdivisions outlined in table 1 were combined to form the agricultural industry. The agriculture and fishing support services subdivision was included because most of the activities in the subdivision are related to the agricultural industry. It is not possible to exclude fishing support services from the subdivision.

#### Table : ANZSIC subdivisions that were combined to form the agricultural industry

| **ANZSIC subdivision** | **ANZSIC code** |
| --- | --- |
| Agriculture and fishing support services | 052 |
| Dairy cattle farming | 016 |
| Deer farming | 018 |
| Fruit and tree nut growing | 013 |
| Mushroom and vegetable growing | 012 |
| Nursery and floriculture production | 011 |
| Other crop growing | 015 |
| Other livestock farming | 019 |
| Poultry farming | 017 |
| Sheep, beef cattle and grain farming | 014 |

Source: ABS 2006.

# Worker fatalities

The fatality statistics in this chapter come from Safe Work Australia’s Traumatic Injury Fatalities database (TIF). The work-related fatalities in the TIF are identified using workers’ compensation data, fatality notifications from jurisdictions, the National Coronial Information System and the media. TIF data excludes fatalities that are attributed to work-related diseases.

## Comparison with other industries

Despite constituting only 2.6 per cent of the Australian workforce between 2010 and 2014, the agricultural industry accounted for 21 per cent (221) of worker fatalities. Over the five-year period, the fatality rate for agricultural workers was 14.8 fatalities per 100 000 workers, which is almost eight times higher than the rate for all industries (1.9) and substantially higher than every other industry. Figure 1 shows fatality rates by industry for the period between 2010 and 2014.

#### Figure : Fatality rates by industry, 2010 to 2014 combined

Source: Traumatic Injury Fatalities database.

## Trends over time

The fatality rate for agricultural workers is falling slower than the national rate. Between 2003 and 2014, the fatality rate for agricultural workers fell by 24 per cent (from 16.6 to 12.6 fatalities per 100 000 workers), while the fatality rate for all industries fell by 41 per cent (from 2.7 to 1.6).

#### Figure : Fatality rates for the agricultural industry and all industries, 2003 to 2014

Source: Traumatic Injury Fatalities database.

## Agricultural subdivisions

Within the agricultural industry, fatality rates vary considerably by industry subdivision. The sheep, beef cattle and grain farming subdivision, which employs almost half (48 per cent) of agricultural workers, had the second-highest fatality rate (19.9 fatalities per 100 000 workers) and the highest number of fatalities (144) between 2010 and 2014. In contrast, no fatalities were recorded in the poultry farming subdivision, which employs the lowest percentage (3 per cent) of agricultural workers in Australia.

#### Table : Fatality and workforce statistics by agricultural subdivision, 2010 to 2014 combined

| **Agricultural subdivision** | **Fatality rate (fatalities per 100 000 workers)** | **Number of fatalities** | **Percentage of agricultural fatalities** | **Percentage of agricultural workforce** |
| --- | --- | --- | --- | --- |
| Agriculture and fishing support services | 20.8 | 20 | 9.0% | 7.6% |
| Sheep, beef cattle and grain farming | 19.9 | 144 | 65.2% | 47.9% |
| Other livestock farming | 18.8 | 13 | 5.9% | 4.6% |
| Other crop growing | 17.6 | 10 | 4.5% | 3.8% |
| Mushroom and vegetable growing | 9.4 | 10 | 4.5% | 7.0% |
| Dairy cattle farming | 6.9 | 10 | 4.5% | 9.6% |
| Fruit and tree nut growing | 6.2 | 11 | 5.0% | 11.7% |
| Nursery and floriculture production | 4.2 | 3 | 1.4% | 4.7% |
| Poultry farming | 0.0 | 0 | 0.0% | 3.1% |
| **Total** | **14.8** | **221** | **100.0%** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: fatality statistics—Traumatic Injury Fatalities database; workforce statistics—Labour Force Survey (ABS 2014).

## Jurisdiction

Between 2010 and 2014, the fatality rate for agricultural workers in the Northern Territory was 44.9 fatalities per 100 000 workers, which is three times higher than the national rate of 14.8. The fatality rate for South Australia (9.5) was substantially lower than the rates for other jurisdictions.

The number of fatalities in each jurisdiction generally reflects the number of agricultural workers in the jurisdiction. The more populous jurisdictions, such as New South Wales, Queensland and Victoria, had a higher number of fatalities than less populous jurisdictions.

#### Table : Fatality and workforce statistics for the agricultural industry by jurisdiction, 2010 to 2014 combined

| **Jurisdiction** | **Fatality rate (fatalities per 100 000 workers)** | **Number of fatalities** | **Percentage of agricultural fatalities** | **Percentage of agricultural workforce** |
| --- | --- | --- | --- | --- |
| Northern Territory | 44.9 | 6 | 2.7% | 0.9% |
| Queensland | 19.2 | 61 | 27.6% | 21.5% |
| Tasmania | 17.8 | 9 | 4.1% | 3.4% |
| New South Wales | 15.0 | 62 | 28.1% | 26.3% |
| Western Australia | 14.2 | 22 | 10.0% | 10.5% |
| Victoria | 12.0 | 45 | 20.4% | 26.1% |
| South Australia | 9.5 | 16 | 7.2% | 11.1% |
| **Total** | **14.8** | **221** | **100.0%** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: fatality statistics—Traumatic Injury Fatalities database; workforce statistics—Labour Force Survey (ABS 2014).

## Age group

Over the five-year period between 2010 and 2014, the fatality rate for agricultural workers aged 65 years and above was 29.5 fatalities per 100 000 workers, which is double the rate for all agricultural workers (14.8). Workers aged 65 years and above also accounted for the highest number (71) of fatalities, which equates to almost one in three agricultural fatalities.

Workers aged 65 years and above are noteworthy because they have a substantially higher fatality rate and their participation in the agricultural industry is increasing. Although the number of agricultural workers fell by 8 per cent between 2005 and 2014, the number of agricultural workers aged 65 years and above increased by 35 per cent (ABS 2014). This age group now accounts for 16 per cent of agricultural workers, which is over five times higher than the percentage of workers in this age group in the Australian workforce (3 per cent) (ABS 2014).

#### Table : Fatality and workforce statistics for the agricultural industry by age group, 2010 to 2014 combined

| **Age group** | **Fatality rate (fatalities per 100 000 workers)** | **Number of fatalities** | **Percentage of agricultural fatalities** | **Percentage of agricultural workforce** |
| --- | --- | --- | --- | --- |
| 15–24 | 15.1 | 21 | 9.5% | 9.3% |
| 25–34 | 9.0 | 19 | 8.6% | 14.1% |
| 35–44 | 9.2 | 25 | 11.3% | 18.2% |
| 45–54 | 12.1 | 38 | 17.2% | 21.1% |
| 55–64 | 13.9 | 44 | 19.9% | 21.2% |
| 65+ | 29.5 | 71 | 32.1% | 16.1% |
| Other | - | 3 | 1.4% | - |
| **Total** | **14.8** | **221** | **100.0%** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: fatality statistics—Traumatic Injury Fatalities database; workforce statistics—Labour Force Survey (ABS 2014).

## Fatalities involving vehicles

Just over three-quarters (168) of the 221 agricultural fatalities between 2010 and 2014 involved vehicles. Of the 168 vehicle fatalities:

* 93 per cent were single-vehicle incidents, and
* 89 per cent occurred on farms.

The vehicle that was involved in the highest number of agricultural fatalities was the tractor, which accounted for over a quarter (27 per cent) of vehicle fatalities. Tractor fatalities most commonly resulted from a tractor rollover or a worker being hit by their own tractor.

There were 11 fatalities that resulted from workers being hit by their own tractors. In most of these cases, the worker had alighted from the tractor in order to open a gate or to carry out maintenance on the tractor or to interact with an object on the ground. The workers sustained fatal injuries when their unmanned tractors rolled and struck them. Most of these fatalities (eight out of 11) were of workers aged 65 years and above.

Around one in five (21 per cent) vehicle fatalities involved quad bikes and over half (53 per cent) resulted from quad bike rollovers. Nineteen per cent of vehicle fatalities involved aircraft, almost all of which (97 per cent) were due to crashes. Around one in 10 (12 per cent) vehicle fatalities involved a car or a ute.

#### Table : Number and percentage of vehicle fatalities for the agricultural industry by type of vehicle and selected types of vehicle incidents, 2010 to 2014 combined

| **Type of vehicle**Nature of vehicle incident | **Number of fatalities** | **Percentage of fatalities** |
| --- | --- | --- |
| **Tractor** | **46** | **27.4%** |
| Rollover | 12 | 26.1% |
| Hit by own vehicle | 11 | 23.9% |
| Hit by moving vehicle | 8 | 17.4% |
| Trapped or crushed by vehicle | 5 | 10.9% |
| **Quad bike** | **36** | **21.4%** |
| Rollover | 19 | 52.8% |
| Hit stationary object | 7 | 19.4% |
| Vehicle incident | 5 | 13.9% |
| **Aircraft** | **31** | **18.5%** |
| Plane crash | 30 | 96.8% |
| Hit by moving vehicle | 1 | 3.2% |
| **Car or ute** | **20** | **11.9%** |
| Rollover | 5 | 25.0% |
| Hit stationary object | 5 | 25.0% |
| Hit by moving vehicle | 4 | 20.0% |
| **Truck** | **14** | **8.3%** |
| Trapped or crushed by vehicle | 5 | 35.7% |
| Hit by own vehicle | 3 | 21.4% |
| **Loader, excavator, backhoe or dozer** | **8** | **4.8%** |
| Hit by falling object | 3 | 37.5% |
| Trapped or crushed by vehicle | 2 | 25.0% |
| **Harvester** | **4** | **2.4%** |
| **Forklift** | **4** | **2.4%** |
| **Motorbike** | **2** | **1.2%** |
| **Mower or slasher** | **2** | **1.2%** |
| **Bus** | **1** | **0.6%** |
| **Total** | **168** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: Traumatic Injury Fatalities database.

## Fatalities involving vehicles by age group

An age-group breakdown of the 168 vehicle-involved fatalities shows that tractors account for a significantly higher percentage of fatalities among workers aged 65 years and above. Although tractors accounted for 27 per cent of vehicle fatalities among all agricultural workers, the vehicle accounted for 46 per cent of vehicle fatalities among workers aged 65 years and above.

Workers aged between 35 and 44 years had the highest percentage of vehicle fatalities that involved aircraft (35 per cent) and trucks (15 per cent), and the lowest percentage of vehicle fatalities that involved quad bikes (10 per cent) and cars or utes (5 per cent).

Among workers aged between 15 and 24 years, there was a more even spread in the types of vehicles that were involved in fatal injuries. There was no single vehicle that was involved in a disproportionately high percentage of fatalities within this age group.

#### Table : Percentage of vehicle fatalities for the agricultural industry by type of vehicle and age group, 2010 to 2014 combined

| **Type of vehicle** | **15–24** | **25–34** | **35–44** | **45–54** | **55–64** | **65+** | **All age groups** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Tractor | 11.8% | 14.3% | 30.0% | 11.1% | 23.5% | 46.3% | 27.4% |
| Quad bike | 11.8% | 21.4% | 10.0% | 22.2% | 26.5% | 22.2% | 21.4% |
| Aircraft | 17.6% | 28.6% | 35.0% | 33.3% | 14.7% | 5.6% | 18.5% |
| Car or ute | 17.6% | 21.4% | 5.0% | 11.1% | 17.6% | 7.4% | 11.9% |
| Truck | 5.9% | 7.1% | 15.0% | 11.1% | 5.9% | 7.4% | 8.3% |
| Loader, excavator, backhoe or dozer | 11.8% | 0.0% | 0.0% | 3.7% | 2.9% | 7.4% | 4.8% |
| Harvester | 0.0% | 0.0% | 0.0% | 3.7% | 5.9% | 1.9% | 2.4% |
| Forklift | 11.8% | 0.0% | 5.0% | 0.0% | 2.9% | 0.0% | 2.4% |
| Motorbike | 11.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 1.2% |
| Other | 0.0% | 7.1% | 0.0% | 3.7% | 0.0% | 1.9% | 1.8% |
| **Total** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: Traumatic Injury Fatalities database.

## Activities associated with vehicle fatalities

Twenty-nine per cent of vehicle fatalities occurred while workers were driving on a farm and the majority (79 per cent) were driving tractors or quad bikes. These workers were undertaking general farm-related duties.

Fourteen per cent of vehicle fatalities were associated with mustering and most cases (88 per cent) involved aircraft or quad bikes. Fourteen per cent of vehicle fatalities took place while workers were loading or unloading vehicles. Around one in 10 (11 per cent) vehicle fatalities occurred during the repair or maintenance of a vehicle. Eight per cent of vehicle fatalities occurred while workers were driving on a public road. Crop dusting or weed spraying accounted for 7 per cent of vehicle fatalities and all cases involved aircraft or quad bikes.

#### Table : Number and percentage of vehicle fatalities for the agricultural industry by vehicle-related activity and selected types of vehicles, 2010 to 2014 combined

| **Vehicle-related activity**Type of vehicle | **Number of fatalities** | **Percentage of fatalities** |
| --- | --- | --- |
| **Driving on a farm** | **48** | **28.6%** |
| Tractor | 19 | 39.6% |
| Quad bike | 19 | 39.6% |
| Car or ute | 6 | 12.5% |
| Loader, excavator, backhoe or dozer | 2 | 4.2% |
| **Mustering** | **24** | **14.3%** |
| Aircraft | 14 | 58.3% |
| Quad bike | 7 | 29.2% |
| **Loading or unloading** | **23** | **13.7%** |
| Tractor | 10 | 43.5% |
| Truck | 7 | 30.4% |
| Forklift | 3 | 13.0% |
| **Repair or maintenance** | **19** | **11.3%** |
| Tractor | 8 | 42.1% |
| Loader, excavator, backhoe or dozer | 3 | 15.8% |
| **Driving on a public road** | **14** | **8.3%** |
| Car or ute | 7 | 50.0% |
| Truck | 3 | 21.4% |
| **Crop dusting or weed spraying** | **12** | **7.1%** |
| Aircraft | 9 | 75.0% |
| Quad bike | 3 | 25.0% |
| **Checking property** | **10** | **6.0%** |
| Aircraft | 6 | 60.0% |
| Quad bike | 4 | 40.0% |
| **Opening gate** | **3** | **1.8%** |
| **Other** | **15** | **8.9%** |
| **Total** | **168** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: Traumatic Injury Fatalities database.

## Fatalities not involving vehicles

Just under a quarter (53) of the 221 agricultural fatalities between 2010 and 2014 did not involve vehicles. In around half (49 per cent) of these cases, the breakdown agency was an animal or human (mostly live, four-legged animals), or was related to the environment (e.g. buildings, vegetation, weather). The breakdown agency identifies the object, substance or circumstance that was principally involved in, or most closely associated with, the point at which things started to go wrong and which ultimately led to the fatal injury.

#### Table : Number and percentage of agricultural fatalities not involving vehicles by breakdown agency of fatal injury, 2010 to 2014 combined

| **Breakdown agency of fatal injury** | **Number of fatalities** | **Percentage of fatalities** |
| --- | --- | --- |
| **Animal, human and biological agencies** | **16** | **30.2%** |
| Cows, steers, cattle, bulls, buffalo | 9 | 56.3% |
| Horses, donkeys, mules | 4 | 25.0% |
| Sheep | 1 | 6.3% |
| Snakes and other reptiles | 1 | 6.3% |
| Other person | 1 | 6.3% |
| **Environmental agencies** | **10** | **18.9%** |
| Buildings and other structures | 5 | 50.0% |
| Vegetation | 2 | 20.0% |
| Weather and water | 1 | 10.0% |
| Fencing | 1 | 10.0% |
| Traffic and ground surfaces other | 1 | 10.0% |
| **Powered equipment, tools and appliances** | **8** | **15.1%** |
| Weapons | 5 | 62.5% |
| Arc welding equipment | 3 | 37.5% |
| **Mobile plant and transport** | **7** | **13.2%** |
| **Machinery and (mainly) fixed plant** | **7** | **13.2%** |
| **Non-powered handtools, appliances and equipment** | **5** | **9.4%** |
| **Total** | **53** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: Traumatic Injury Fatalities database.

# Workers’ compensation claims

The workers’ compensation statistics in this chapter come from Safe Work Australia’s National Data Set for Compensation-Based Statistics (NDS). The NDS is a collection of workers’ compensation data from each Australian jurisdiction. Data for 2013–14 are preliminary (denoted by 'p' in tables and figures) and are subject to revision. Below are the main limitations of the NDS data in this chapter:

* Only serious claims are presented. A serious claim is an accepted workers’ compensation claim that involves one or more weeks away from work and excludes all fatalities, and all injuries experienced while travelling to or from work or while on a break away from the workplace.
* Workers’ compensation schemes do not generally cover self-employed workers. Because a relatively high percentage of agricultural workers are self-employed, NDS data under-represents the number of injuries and diseases of agricultural workers more than it does for workers in other industries. The denominators used to calculate rates were adjusted to only include agricultural workers who are eligible for workers’ compensation (this adjustment was also done for other industries). Therefore, the rates of serious claims for the agricultural industry can be compared to the rates for other industries.
* Some employees who are eligible for workers’ compensation do not lodge a claim after a work-related injury or disease.
* Diseases are under-represented because many diseases result from long-term exposure to agents or have long latency periods and this makes the link between the work-related disease and the workplace difficult to establish.

## Comparison with other industries

Of the 596 855 serious claims lodged between 2009–10 and 2013–14, 16 185 were made by employees in the agricultural industry. Over the five-year period, the frequency rate for agricultural employees was 11.0 serious claims per million hours worked, which is 59 per cent higher than the rate for all industries (6.9) and higher than every other industry. Figure 3 shows frequency rates of serious claims by industry for the period between 2009–10 and 2013–14.

#### Figure : Frequency rates of serious claims by industry, 2009–10 to 2013–14p combined

Source: National Data Set for Compensation-Based Statistics.

Although the frequency rate of serious claims for the agricultural industry is 59 per cent higher than the rate for all industries, the median amount of compensation ($7 700) is 13 per cent lower than the median for all industries ($8 800). The median time lost for the agricultural industry (5.8 working weeks) is 7 per cent higher than the median time lost for all industries (5.4 working weeks).

## Trends over time

The rate of serious claims for agricultural employees is falling slower than the national rate. Figure 4 shows that the frequency rate of serious claims for the agricultural industry fell by 14 per cent from 14.0 serious claims per million hours worked in 2000–01 to 12.1 in 2012–13. Over the same period, however, the frequency rate for all industries fell by 31 per cent from 9.5 to 6.6. Data for 2013–14 are preliminary and are excluded when calculating the percentage change over time.

#### Figure : Frequency rates of serious claims for the agricultural industry and all industries, 2000–01 to 2013–14p

Source: National Data Set for Compensation-Based Statistics.

## Agricultural subdivisions

Frequency rates of serious claims vary considerably by industry subdivision. Agricultural workers in the other livestock farming subdivision had the highest frequency rate (21.1 serious claims per million hours worked), which is almost double the rate for all agricultural workers (11.0). The other livestock farming subdivision is comprised of businesses that breed or keep horses, pigs, bees and other animals that are not classified elsewhere. The dairy cattle farming subdivision had the lowest frequency rate (6.9) over the five-year period.

The highest median time lost occurred in the dairy cattle farming subdivision (7.2 working weeks) and the highest median amount of compensation occurred in the sheep, beef cattle and grain farming subdivision ($8 900).

#### Table : Serious claims: statistics by agricultural subdivision, 2009–10 to 2013–14p combined

| **Agricultural subdivision** | **Frequency rate (serious claims per million hours worked)** | **Percentage of serious claims** | **Median time lost (working weeks)** | **Median compensation** |
| --- | --- | --- | --- | --- |
| Other livestock farming | 21.1 | 9.5% | 4.2 | $6 300 |
| Agriculture and fishing support services | 17.5 | 13.5% | 5.8 | $7 700 |
| Other crop growing | 13.4 | 4.0% | 5.6 | $7 900 |
| Poultry farming | 13.2 | 5.3% | 5.6 | $7 100 |
| Nursery and floriculture production | 12.2 | 6.1% | 4.6 | $6 200 |
| Fruit and tree nut growing | 10.4 | 13.2% | 4.6 | $5 800 |
| Sheep, beef cattle and grain farming | 9.8 | 35.7% | 6.4 | $8 900 |
| Mushroom and vegetable growing | 7.8 | 6.3% | 6.4 | $6 900 |
| Dairy cattle farming | 6.9 | 6.4% | 7.2 | $8 700 |
| **Total** | **11.0** | **100.0%** | **5.8** | **$7 700** |

The sum of percentages may not equal 100% due to rounding.
Source: National Data Set for Compensation-Based Statistics.

## Jurisdiction

Over the five-year period between 2009–10 and 2013–14, agricultural employees in the Northern Territory experienced the highest rate of serious claims (19.0 serious claims per million hours worked), while employees in Victoria experienced the lowest (5.9). The national rate over the five-year period was 11.0 serious claims per million hours worked. Figure 5 shows the wide jurisdictional variations in rates of serious claims for agricultural employees in Australia.

#### Figure : Frequency rates of serious claims by jurisdiction, 2009–10 to 2013–14p combined

Source: National Data Set for Compensation-Based Statistics.

## Breakdown agency of injury or disease

Almost a quarter (24 per cent) of agricultural employees’ serious claims involved animal, human or biological agencies, and the most common type was live, four-legged animals (87 per cent). Mobile plant and transport were involved in 17 per cent of serious claims and the most common types were motorcycles and tractors (46 per cent).

#### Table : Percentage of serious claims for the agricultural industry and all industries by breakdown agency of injury or disease, 2009–10 to 2013–14p combined

| **Breakdown agency of injury or disease** | **Agricultural industry** | **All industries** |
| --- | --- | --- |
| **Animal, human and biological agencies** | **24.0%** | **13.0%** |
| Cows, steers, cattle, bulls, buffalo | 29.0% | 0.9% |
| Horses, donkeys, mules | 27.8% | 3.3% |
| Sheep | 22.1% | 0.3% |
| Pigs | 4.6% | 0.1% |
| Other four-legged animals | 3.1% | 2.0% |
| Other person | 3.2% | 79.4% |
| **Mobile plant and transport** | **17.1%** | **9.1%** |
| Motorcycles and sidecars, scooters | 28.1% | 1.8% |
| Tractors, agricultural or otherwise | 17.5% | 0.8% |
| Trucks, semi-trailers, lorries | 12.6% | 28.5% |
| Cars, station wagons, vans, utilities | 7.6% | 24.2% |
| Trailers, caravans | 5.6% | 3.6% |
| Trolleys, handcarts | 4.1% | 12.6% |
| All-terrain vehicle (ATV) | 3.8% | 0.2% |
| **Non-powered handtools, appliances and equipment** | **16.0%** | **24.6%** |
| Crates, cartons, boxes, cases, drums, kegs, barrels | 14.1% | 20.5% |
| Ladders | 10.5% | 6.0% |
| Knives and cutlery | 10.5% | 5.2% |
| **Environmental agencies** | **15.5%** | **15.6%** |
| Traffic and ground surfaces other | 25.9% | 26.2% |
| Vegetation | 17.7% | 2.5% |
| Fencing | 14.5% | 2.3% |
| Holes in the ground | 7.7% | 5.3% |
| **Materials and substances** | **9.0%** | **12.8%** |
| Ferrous and non-ferrous metal | 21.4% | 23.3% |
| **Machinery and (mainly) fixed plant** | **6.4%** | **4.8%** |
| Sheep shearing plant | 22.0% | 0.0% |
| Forklift trucks | 10.8% | 16.9% |
| **Powered equipment, tools and appliances** | **2.4%** | **4.7%** |
| **Chemicals and chemical products** | **0.8%** | **0.7%** |
| **Total** | **100.0%** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: National Data Set for Compensation-Based Statistics.

## Mechanism of injury or disease

The mechanism identifies the action, exposure or event that led to the most serious injury or disease. More than half (54 per cent) of serious claims made by agricultural employees between 2009–10 and 2013−14 arose from body stressing or being hit by moving objects. Compared with employees in all industries, a substantially higher percentage of serious claims made by agricultural employees were due to being hit by moving objects (27 per cent versus 14 per cent) and vehicle incidents (11 per cent versus 6 per cent).

#### Table : Percentage of serious claims for the agricultural industry and all industries by mechanism of injury or disease, 2009–10 to 2013–14p combined

| **Mechanism of injury or disease** | **Agricultural industry** | **All industries** |
| --- | --- | --- |
| **Body stressing** | **27.0%** | **42.3%** |
| Muscular stress while handling objects other than lifting, carrying or putting down objects | 48.6% | 37.9% |
| Muscular stress while lifting, carrying, or putting down objects | 34.0% | 41.5% |
| **Being hit by moving objects** | **27.0%** | **14.3%** |
| Being hit by an animal | 37.5% | 3.7% |
| Being hit by moving objects | 27.0% | 14.3% |
| **Falls, trips and slips of a person** | **23.1%** | **22.0%** |
| Falls from a height | 47.1% | 27.7% |
| Falls on the same level | 46.4% | 64.1% |
| **Vehicle incidents and other** | **10.8%** | **6.0%** |
| Vehicle accident | 67.0% | 40.7% |
| **Hitting objects with a part of the body** | **8.7%** | **6.8%** |
| Hitting moving objects | 53.8% | 47.2% |
| Hitting stationary objects | 45.6% | 51.9% |
| **Other** | **3.5%** | **8.7%** |
| **Total** | **100.0%** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: National Data Set for Compensation-Based Statistics.

## Nature of injury or disease

Between 2009–10 and 2013–14, the percentage of serious claims associated with injury and musculoskeletal disorders was higher among agricultural employees than employees in all industries (95 per cent versus 89 per cent). Diseases were associated with a considerably lower percentage of serious claims among agricultural employees (5 per cent versus 11 per cent).

As shown in table 12 below, there are two pronounced differences between agricultural employees and employees in all industries—the percentage of serious claims involving fractures was more than twice as high among agricultural employees (19 per cent versus 9 per cent) and the percentage of serious claims involving mental disorders was eight times lower (0.8 per cent versus 6.4 per cent).

#### Table : Percentage of serious claims for the agricultural industry and all industries by nature of injury or disease, 2009–10 to 2013–14p combined

| **Nature of injury or disease** | **Agricultural industry** | **All industries** |
| --- | --- | --- |
| Injury and musculoskeletal disorders |
| Traumatic joint/ligament and muscle/tendon injury | 39.5% | 45.7% |
| Wounds, lacerations, amputations and internal organ damage | 21.2% | 14.8% |
| Fractures | 19.3% | 9.0% |
| Musculoskeletal and connective tissue diseases | 9.3% | 14.6% |
| Burn | 1.2% | 1.5% |
| Intracranial injuries | 0.7% | 0.4% |
| **Total: injury and musculoskeletal disorders** | **95.0%** | **88.9%** |
| Diseases |
| Digestive system diseases | 1.5% | 2.4% |
| Skin and subcutaneous tissue diseases | 1.0% | 0.5% |
| Nervous system and sense organ diseases | 0.9% | 1.1% |
| Mental disorders | 0.8% | 6.4% |
| Infectious and parasitic diseases | 0.5% | 0.2% |
| **Total: diseases** | **5.0%** | **11.1%** |
| **Total: serious claims** | **100.0%** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: National Data Set for Compensation-Based Statistics.

## Bodily location of injury or disease

Between 2009–10 and 2013–14, the bodily location that was involved in the highest percentage of agricultural employees’ serious claims was the hand, fingers and thumb (17 per cent). Compared with employees in all industries, a notably lower percentage of agricultural employees’ serious claims involved the back (16 per cent versus 22 per cent).

#### Table : Percentage of serious claims for the agricultural industry and all industries by bodily location of injury or disease, 2009–10 to 2013–14p combined

| **Bodily location of injury or disease** | **Agricultural industry** | **All industries** |
| --- | --- | --- |
| Hand, fingers and thumb | 16.6% | 12.4% |
| Back | 15.6% | 22.2% |
| Knee | 10.3% | 9.4% |
| Shoulder | 10.1% | 10.4% |
| Ankle | 6.7% | 4.9% |
| Wrist | 5.0% | 4.7% |
| Foot and toes | 4.2% | 3.4% |
| Lower leg | 3.9% | 2.1% |
| Chest (thorax) | 3.0% | 1.6% |
| Forearm | 2.8% | 1.5% |
| Abdomen and pelvic region | 2.7% | 3.2% |
| Elbow | 2.2% | 2.4% |
| Upper leg | 1.5% | 0.8% |
| Other | 15.5% | 20.9% |
| **Total** | **100.0%** | **100.0%** |

The sum of percentages may not equal 100% due to rounding.
Source: National Data Set for Compensation-Based Statistics.

# Further information

## Explanatory notes

Explanatory notes for the TIF and the NDS are available on the following website: <http://www.safeworkaustralia.gov.au/sites/swa/about/publications/pages/explanatory-notes-datasets>

## References

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