

Canadian Agriculture Injury Reporting

Machine-related Deaths in Agriculture

2011 – 2020



CASA | ACSA

Canadian Agricultural Injury Reporting
Surveillance des blessures agricoles au Canada

FUNDING AND SUPPORT

Canadian Agricultural Injury Reporting (CAIR) is supported financially by the Canadian Agricultural Safety Association (CASA). CASA is funded in part through the Canadian Agricultural Partnership, a federal, provincial and territorial initiative and receives additional support from the agricultural and corporate sectors.



Thank you to all individuals and agencies that have contributed to CAIR and the preparation of this report.

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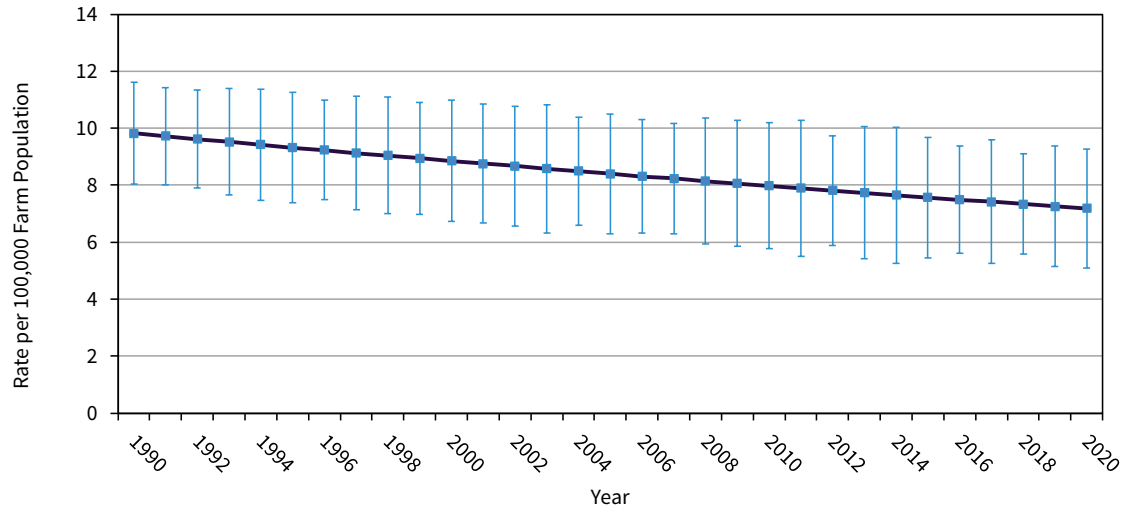
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MACHINE-RELATED AGRICULTURE DEATH RATE BY YEAR, 1990-2020

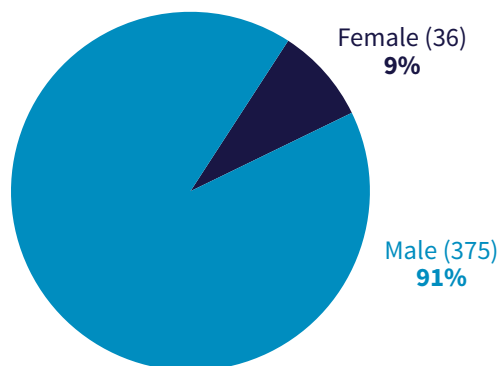


Over the 31-year period from 1990 to 2020, there were 1,968 machine-related agriculture injury deaths. This equates to an average of 63 deaths each year.

During the first 16 years (1990 – 2005), there were 79 machine-related agriculture deaths each year. During the latter 15 years (2006 – 2020), there were an average of 46 machine-related agriculture injury deaths each year. There was a 42% decrease between the 2 averages.

From this point forward, the report will focus on the most current 10 years of data available, 2011 – 2020

PERCENT OF MACHINE-RELATED AGRICULTURE DEATHS BY SEX, 2011-2020



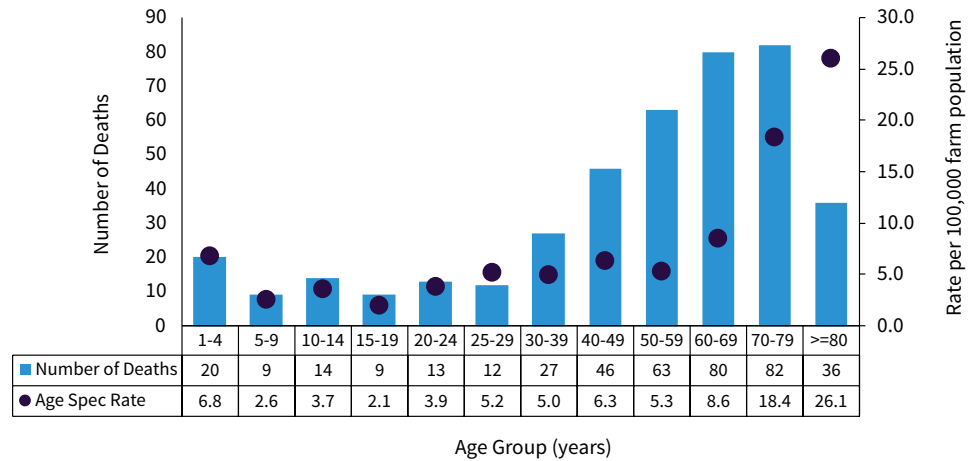
Over the 10-year period from 2011 to 2020, there were 411 machine-related agriculture deaths.

Of those deaths, 91% (n=375) were males who died as a result of a machine-related agriculture injury.

The remaining 9% (n=36) of the machine-related agriculture deaths were females.

NUMBER AND RATE OF MACHINE-RELATED AGRICULTURE DEATHS BY AGE GROUPS, 2011-2020

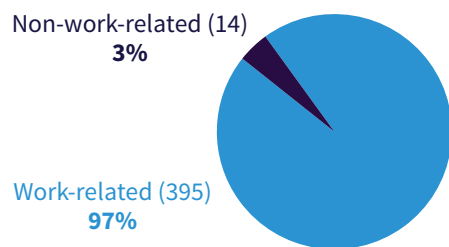
When analyzing the number and rates of machine-related agriculture-related deaths, farmers 70 to 79 years of age had the highest number of deaths (n=82), with a rate of 18.4 deaths per 100,000 farm population.



Farmers 60 to 69 years of age followed closely with the second highest number of machine-related deaths (n=80). However, those 60 to 69 years of age had a death rate half that of farmers 70 to 79 years of age due to a larger farmer population in the 60 to 69 years age group.

The age group with the highest death rate was farmers 80 years of age and older with a machine-related death rate of 26.1 deaths per 100,000 farm population (n=36).

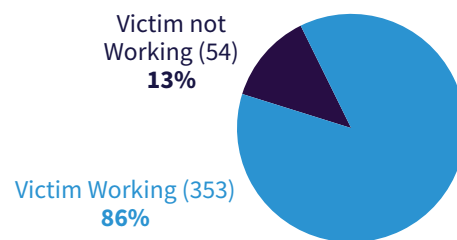
TASK PERFORMANCE STATUS IN AGRICULTURE-RELATED DEATHS, 2011-2020



Agriculture-related work activities were involved in 97% (n=395) of the machine-related agriculture deaths.

In the remaining 3% (n=14) of the deaths, work was not being performed at the time of death (e.g.: ATV riding). There were 2 deaths for which it could not be determined if work was being performed.

In the majority of the machine-related agriculture deaths, 86% (n=353), the deceased



were performing agriculture work activities at the time of death.

In the remaining 13% (n=54) of the deaths, the victim was not working at the time of death; they were, however, within the vicinity of a work-related activity. (e.g.: runover by a tractor that was being used for agriculture work).

There were 4 deaths in which it could not be determined if the deceased was working at the time of death.

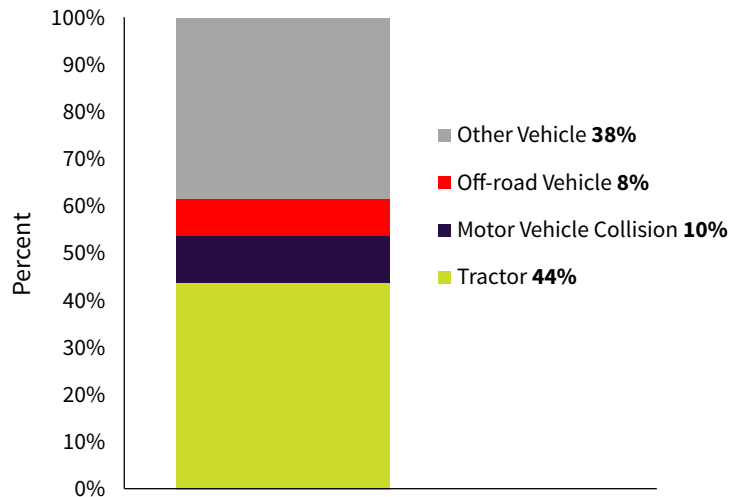
PERCENT OF MACHINE-RELATED DEATHS BY MACHINE TYPE, 2011-2020

Over the 10-year period from 2011 to 2020, there were 411 machine-related agriculture deaths.

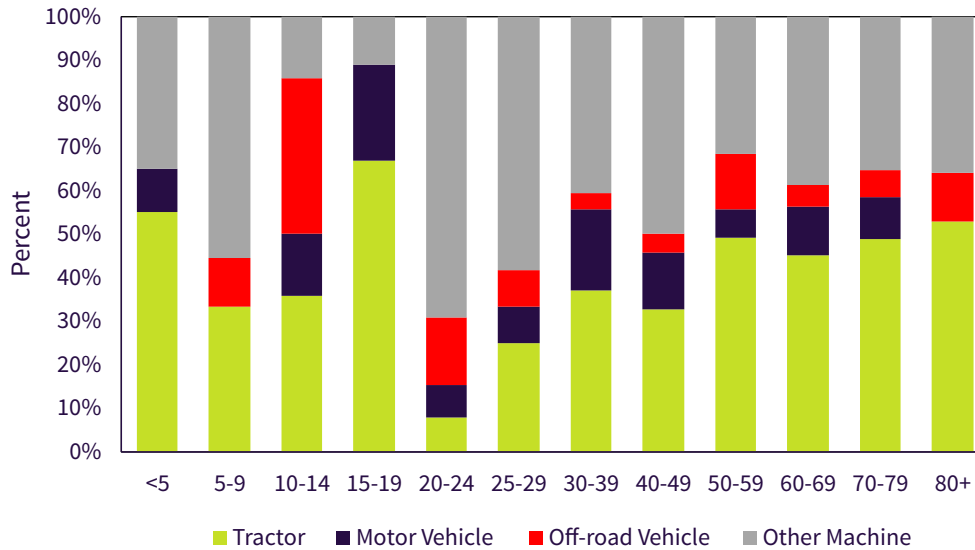
Nearly half of the deaths, 44% (n=180), involved a tractor. In 10% (n=40) of the machine-related deaths, the deceased was either the driver, passenger, or bystander of a motor vehicle collision with a piece of farm equipment.

Another 8% (n=33) of the deaths involved an off-road vehicle.

The remaining 38% (n=158) of deaths involved 21 different types of farm equipment.



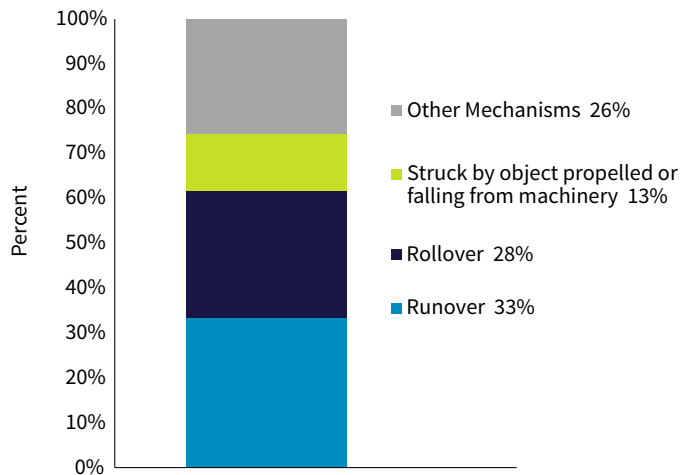
PERCENT OF MACHINE-RELATED AGRICULTURE DEATHS BY MACHINE TYPE AND AGE GROUPS, 2011-2020



When analyzing the leading machine types involved in agriculture-related injury deaths by age group:

- Tractors were the leading machine deaths, accounting for 55% (n=11) of all deaths for children 1 to 4 years of age.
- Tractors accounted for 33% (n=3) of deaths of children 5 to 9 years of age.
- Tractors and off-road vehicles each accounted for 36% (n=5) of youth 10 to 14 years of age.
- Tractors accounted for 67% (n=6) deaths of youth 15 to 19 years of age.
- Other machines accounted for 69% (n=9) of the deaths of those 20 to 24 years of age.
- Other machines accounted for 58% (n=7) of the deaths of those 25 to 29 years of age.
- Other machines accounted for 41% (n=11) of the deaths of those 30 to 39 years of age. This was followed by deaths involving tractors accounting for another 37% (n=10).
- Other machines accounted for 50% (n=23) of the deaths of those 40 to 49 years of age. This was followed by deaths involving tractors accounting for another 33% (n=15).
- Tractor accounted for 49% (n=31) of the deaths of those 50 to 59 years of age.
- Tractors accounted for 45% (n=36) of the deaths of those 60 to 69 years of age.
- Tractors accounted for 49% (n=40) of the deaths of those 70 to 79 years of age.
- Tractors accounted for 53% (n=19) of the deaths of those 80 years of age and older.

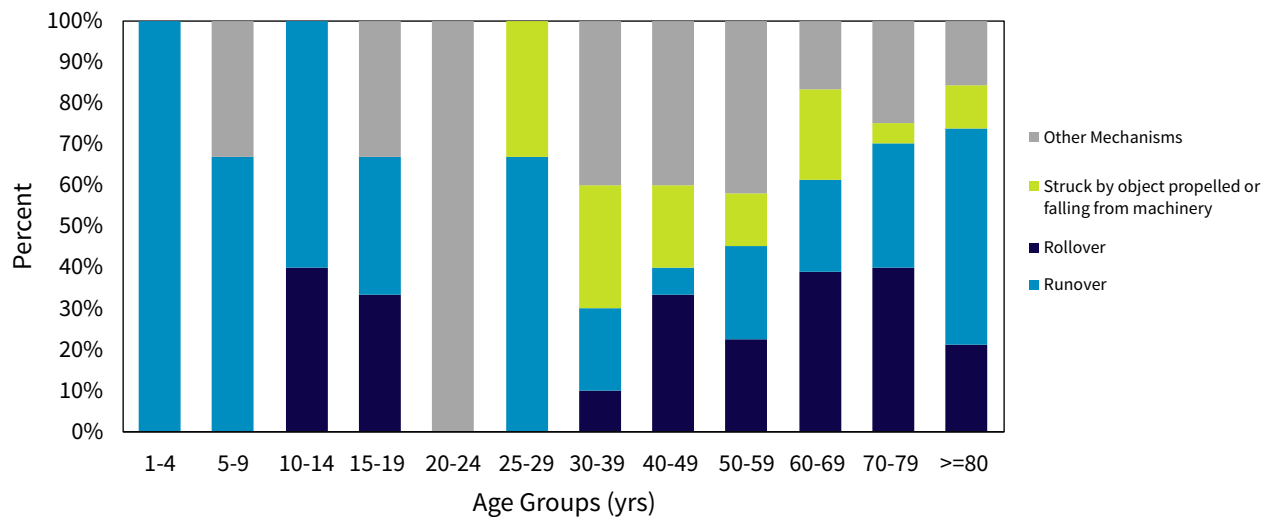
PERCENT OF TRACTOR-RELATED AGRICULTURE DEATHS BY MECHANISM OF INJURY, 2011-2020



Of the 180 tractor-related deaths, 28% (n=51) were the result of a rollover.

Another 33% (n=60) of deaths were the result of a runover, while 13% (n=23) were the result of being struck by an object propelled or falling from machinery. This most often involved a large bale being moved with a tractor and front end loader.

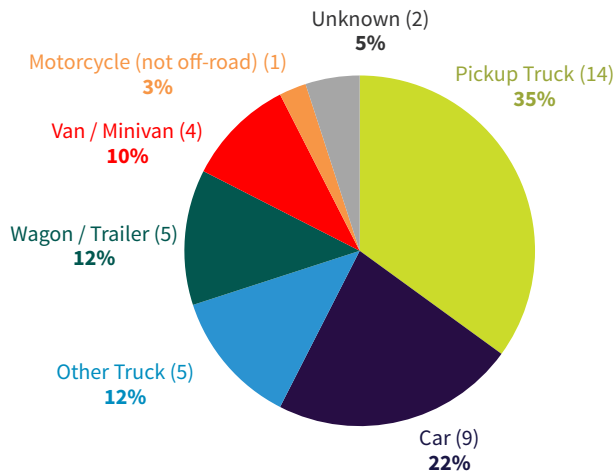
PERCENT OF TRACTOR-RELATED AGRICULTURE DEATHS BY MECHANISM OF INJURY AND AGE GROUP, 2011-2020



When analyzing the leading mechanisms of injuries of tractor-related deaths by age group:

- 100% of the children between 1 and 4 years of age were runover by a tractor (n=11)
- 67% of the children between 5 and 9 year of age were runover by a tractor (n=2)
- 60% of the children between 10 and 14 years of age were runover by a tractor (n=3), and another 40% (n=2) were involved in a tractor rollover
- 33% of the youth between 15 and 19 years of age were runover by a tractor (n=2), and another 33% (n=2) were involved in a tractor rollover

PERCENT OF MOTOR COLLISION-RELATED AGRICULTURE DEATHS BY VEHICLE TYPE, 2011-2020



Of the 40 motor-vehicle collision-related deaths, the majority of the vehicles involved with farm machinery were pick up trucks with 35% (n=14). (Includes: quarter-, half-, three-quarter and 1-ton trucks).

In 22% (n=9) of motor-vehicle collision-related deaths, the other vehicle was a car.

Other trucks (e.g.: grain trucks, fuel trucks, 4 ton trucks) accounted for 12% (n=5) of deaths.

Wagons or trailers accounted for another 12% (n=5) of deaths.

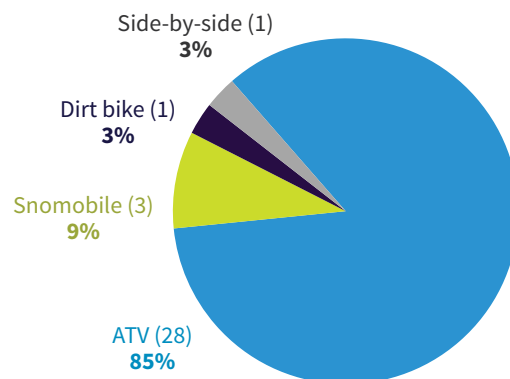
Collisions involving a van or minivan accounted for 10% (n=10), while collisions involving a motorcycle accounted for 3% (n=1).

PERCENT OF OFF-ROAD-VEHICLE COLLISION-RELATED AGRICULTURE DEATHS BY VEHICLE TYPE, 2011-2020

Of the 33 off-road vehicle agriculture-related deaths, the majority of the vehicles involved were all-terrain-vehicles which accounted for 85% (n=28) of these deaths. These include 3-wheelers (ATC), 4-wheeled ATVs “quads”.

Another 9% (n=3) of off-road vehicle collision deaths involved a snowmobile.

Dirt bikes and side-by-sides (UTVs) each accounted for 3% (n=1).



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