



# Canadian Agricultural Injury Surveillance Program

## Agricultural Fatalities 1990-2004

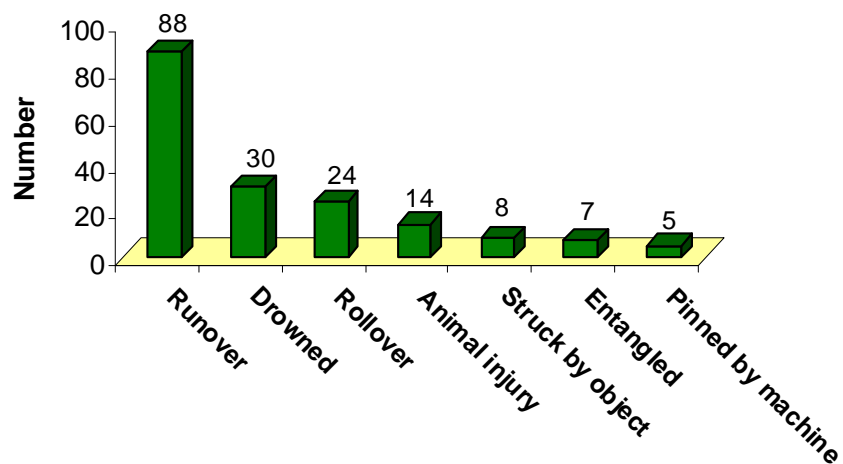
### Fast Facts: Fatal Injuries in Children Under 15

In the fifteen years from 1990 to 2004, 209 children under fifteen were killed in agricultural injury events. 74.2% of the children died as a result of agricultural work, but in 80.4% of the cases the victims themselves were not working. 65.1% of the deaths were machine-related.

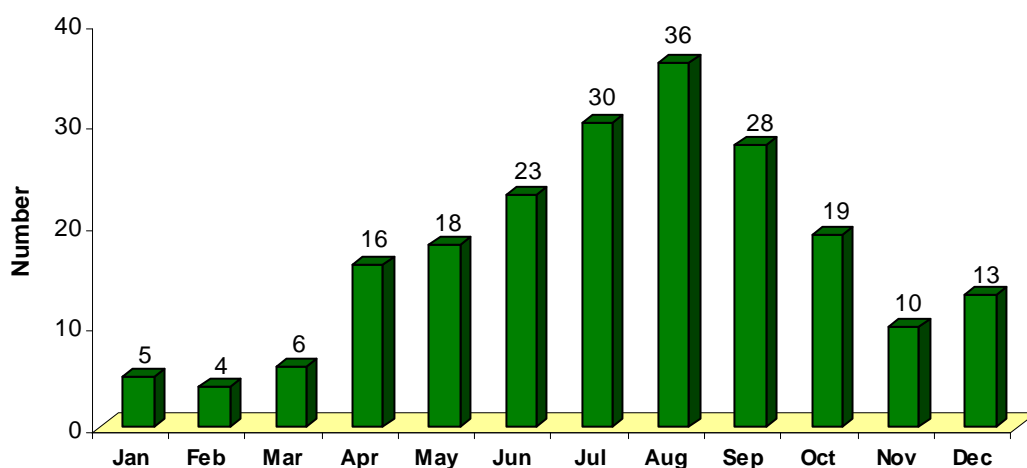
### Top Ten Causes of Agricultural Fatalities in Children Under 15

Rank	Cause of Injury	Number	Percent
1	Runover	88	42.1
2	Drowning	30	14.4
3	Machine rollover	23	11.1
4	Animal-related injury	14	6.7
5	Pinned/struck by heavy non-machine object	8	3.8
6	Machine entanglement	7	3.3
7	Pinned by machine	5	2.4
8	Traffic collision	4	1.9
9	Fall from machine	3	1.4
10	Fall from height	2	1.0

- Overall, 42.1% of the children died in runovers, 14.4% drowned and 11.1% were killed in rollovers. 67.6% of the child deaths resulted from only three mechanisms of injury.

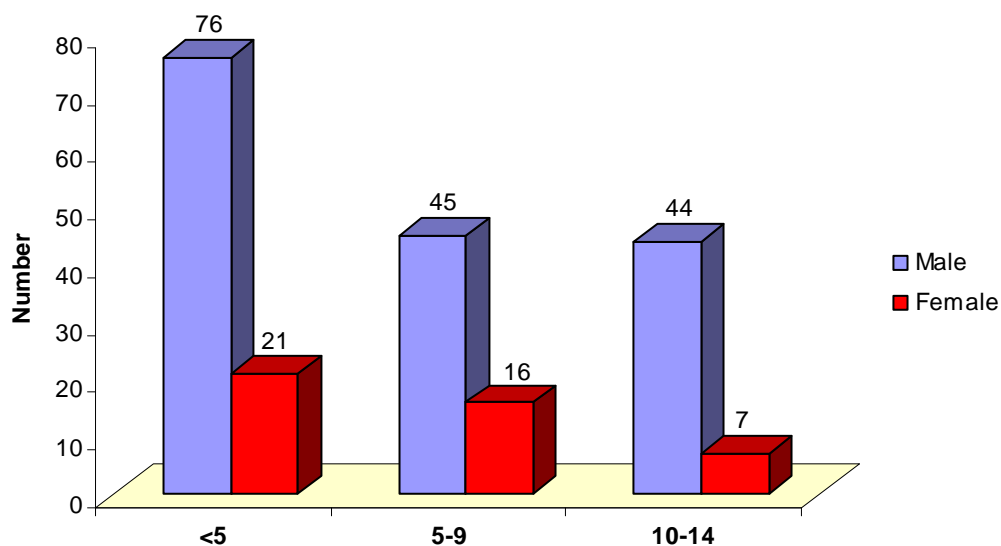


## Month of Occurrence for Child Agricultural Fatalities



- 45.0% of child fatalities occurred in the months of July, August and September.

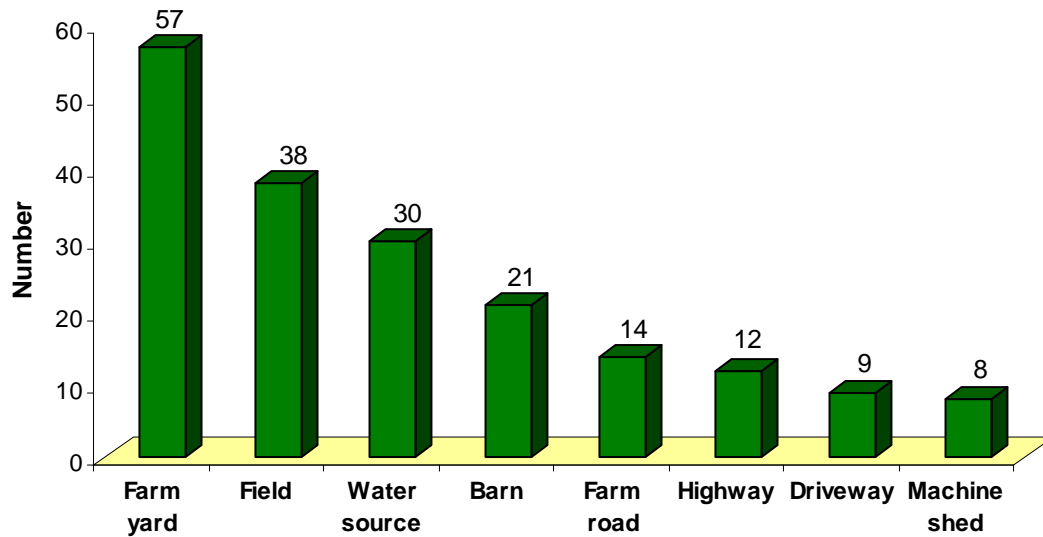
## Age and Gender of Child Victims



	Male	Female	Total	
<5	76	21	97	46.4%
5-9	45	16	61	29.2%
10-14	44	7	51	24.4%
<b>Total:</b>	<b>165</b>	<b>44</b>	<b>209</b>	
	78.9%	21.1%		

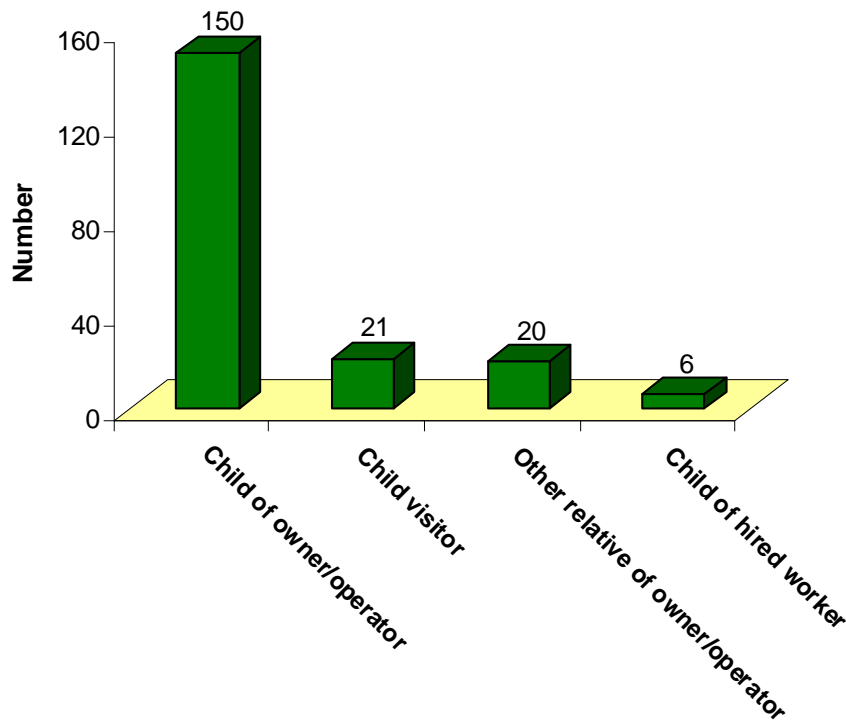
- 46.4% of the children who died were 1 to 4 years old.
- Overall, 78.9% were male.

## *Location of Occurrence for Fatal Agricultural Injuries in Children*



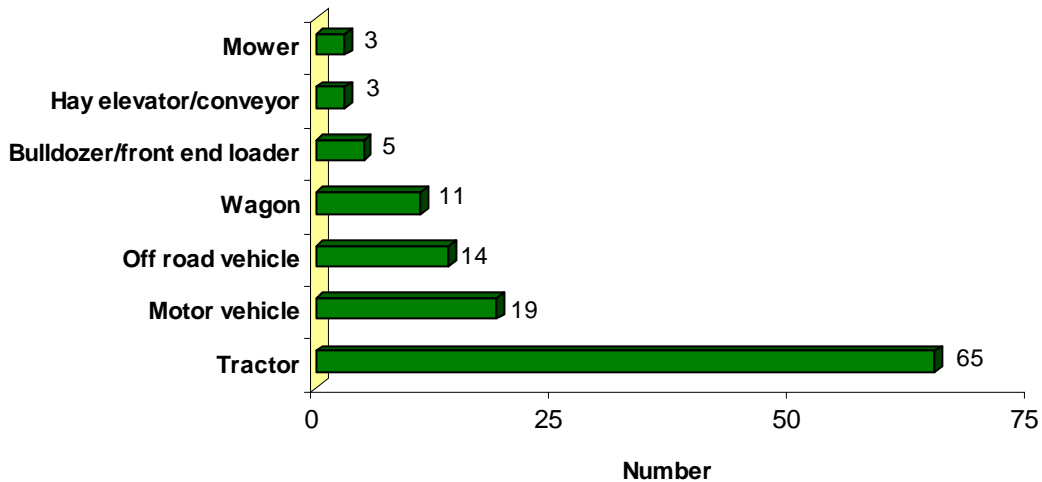
- The most common locations for child fatalities were farm yards (27.3%), fields (18.2%), water sources (14.4%) and barns (10.0%).

## *Relationship of Child Victims to Owner/Operators*



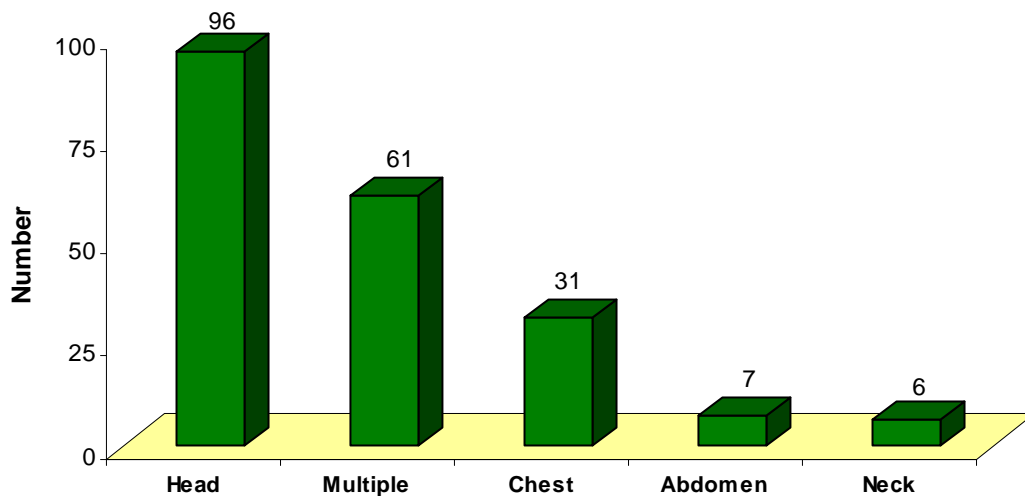
- Children of owner operators were involved in 71.8% of the fatalities.
- Only 10.0% of the child victims were visitors.

## *Types of Machines Involved in Fatal Agricultural Injuries in Children*



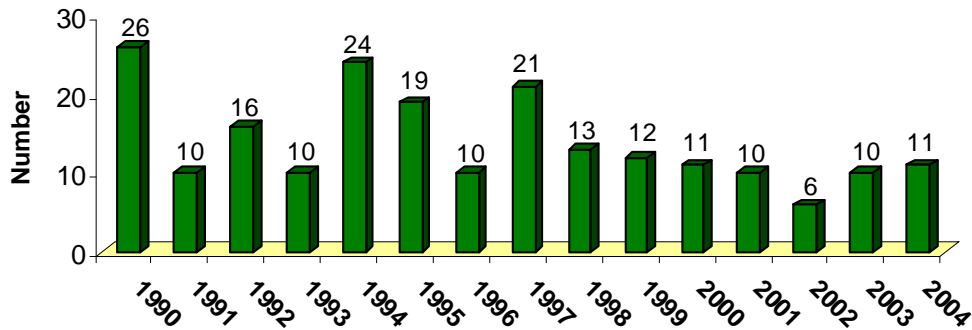
- Of the 136 machine-related fatal injuries, 47.8% involved tractors.
- Motor vehicles were the next most common machine type (14.0%), followed by off-road vehicles (10.3%).

## *Anatomic Locations of Fatal Agricultural Injuries in Children*



- Of the child victims where location of death was known, 60.8% died at the scene from very serious, often multiple injuries. 30.7% of the children died in hospital and 8.5% died on the way to the hospital.

## *15-Year Trend for Agricultural Fatalities in Children*



- There was considerable variation in the number of child fatalities per year. Over the 15-year surveillance period, the average annual number of child fatalities was 13.9.
- The average number of fatalities annually for the first seven years of the surveillance period was 16.4, whereas the average over the last seven years was 10.4. The overall trend showed a reduction in the number of agricultural fatalities in children from 1990 to 2004.

## *Age Specific Recommendations*

### *Preschool Children Aged 1 to 4*

- Preschool children should not be permitted in the farm or ranch work site, which includes the farm yard and driveway where most bystander runovers occur.
- Children of any age should not be taken as extra riders on tractors or other farm machines.
- Preschool children should be supervised closely and constantly by an adult whenever they are outside of the farm home, or cared for within a safe, fenced-in play area.
- Drowning hazards, such as manure pits, should be fenced off.
- Heavy objects such as machine parts, large tires, fence panels, gates and steel dividers should be stored securely or left lying flat on the ground.



## *Young School Children Aged 5 to 9*

- According to the North American Guidelines for Children's Agricultural tasks (NAGCAT<sup>1</sup>), children under eight years old should not be assigned work tasks.
- Children of any age should not be taken as extra riders on tractors or other farm machines.
- Young school children should not be permitted in areas of the farm or ranch work site where machinery is kept or used.
- Eight and nine year old children may be assigned age-appropriate work tasks, as defined by NAGCAT. Adequate training and close, continuous supervision should be provided.
- Tasks involving machinery are not appropriate for children in this age group.

## *Older School Children Aged 10 to 14*

- Work tasks assigned to children aged 10 to 14 should be in accordance with the North American Guidelines for Children's Agricultural tasks (NAGCAT). Adequate training and close, continuous supervision should be provided.
- According to NAGCAT, children under 12 should not operate tractors of any size, including lawn tractors.
- Tractors over 70HP should not be operated by children aged 12 to 14.
- Tractors should be equipped with seatbelts and rollover protection structures.
- Children should not be permitted to ride in the cargo areas of trucks, on bumpers or on running boards.
- CSA-approved helmets should be worn when riding horses and when operating any off road vehicle.
- Full-sized off road vehicles should not be driven by children aged 10 to 14.

<sup>1</sup><http://www.nagcat.org/nagcat/pages/default.aspx>

