

## ***Appendix A Decision Rules***

### ***Inclusion of deaths and injuries in the CAISP fatality database***

#### **Alcohol Involvement**

Fatal injuries where the victim was under the influence of alcohol were included in the database if they involved agricultural work or an agricultural hazard.

#### **Deaths on Highways**

Fatal injuries on public highways that involved agricultural vehicles, agricultural machinery or farm animals were included in the database.

#### **Medical Conditions**

Deaths attributed to pre-existing medical conditions (e.g., previous seizure or heart attack) were excluded from the fatality database. Deaths where an agricultural injury (such as a fall from a machine) was immediately preceded by a significant medical event such as a stroke, seizure or heart attack, were also excluded. Deaths from a heart attack where the victim was engaged in strenuous agricultural work at the time of or immediately before the heart attack are included in the fatality database as “overexertion”.

#### **Secondary Complications**

Deaths that occurred in hospital from secondary complications of agricultural injuries (e.g., embolism, respiratory distress) were included in the fatality database. Note: New Brunswick does not identify these cases as farm-related if the death occurred more than two weeks after the agricultural injury.

#### **Off Road Vehicles**

Deaths involving off road vehicles such as ATVs, dirt bikes and dune buggies were included in the fatality database if they occurred on a farm or ranch and/or involved agricultural work.

#### **Children at Play**

Deaths of children who were playing in the agricultural work place were included e.g., cases where a person engaged in agricultural work was unable to supervise a child whom he/she had taken to the agricultural work place; cases where a child was killed as a direct result of someone engaged in an agricultural work activity; cases where a child was killed due to a hazard of the farm or ranch environment such as a farm animal, dugout, manure pit etc.



## Appendix B Glossary

### General Terms

#### **Agricultural Fatalities**

CAISP defines an agricultural fatality as 1) Any unintentional injury resulting in death that occurs during activities related to the operation of a farm or ranch in Canada and/or 2) Any unintentional injury resulting in death that involves any hazard of a farm or ranch environment in Canada (excluding fatal non work-related injuries that take place in the farm residence). This includes deaths that occur away from agricultural work locations if agricultural work is being done; e.g., transporting workers, livestock, supplies or harvested crops on public highways; farm animals roaming on public highways. Deaths where victims are killed because a third party is engaged in agricultural work are also included.

#### **Denominator data**

Data used as denominator values in rate calculations. If presented as a fraction, the lower half of an injury rate refers to the population exposed over a given period of time.

#### **Farm**

Any farm or other agricultural holding that produces at least one of the following agricultural products intended for sale: crops, livestock, poultry, animal products, greenhouse or nursery products, mushrooms, sod, honey, or maple syrup products. (*Census of Agriculture, Statistics Canada.*)

#### **Numerator data**

Data used as numerator values in rate calculations. If presented as a fraction, the top half of an injury rate refers to the number of cases (events) for a particular mechanism of injury and/or age group.

#### **Runovers**

Machine-related agricultural injuries were identified and coded by CAISP as “agricultural runovers” if the victim was runover, struck, or pinned by an upright vehicle or agricultural machine that was under power or rolling on an incline.

#### **Alighted operator runover (subcategory of unmanned runover)**

*An operator is runover, pinned or struck by an unmanned machine under power or rolling on an incline, or by a machine or implement towed by it. Includes being runover while attempting to board a moving unmanned machine. Does not include cases where the decedent had been improperly starting the machine.*

#### **Bystander runover**

*A bystander is runover, pinned or struck by a manned machine, or by a machine or implement towed by it; includes being runover while attempting to board or alight from a moving manned machine.*

#### **Extra rider runover**

*A passenger falls from a machine and is then runover, pinned or struck by the machine, or by a machine or implement towed by it.*

#### **Improper start runover (subcategory of unmanned runover)**

*A person is runover by an unmanned machine subsequent to starting it by any means other than that specified by the machine’s manufacturer. Includes bypass and jump starting.*

#### **Operator runover**

*An operator falls from a machine and is then runover, pinned or struck by the machine, or by a machine or implement towed by it.*

**Unmanned runover**

*A person is runover, pinned or struck by an unmanned machine, or by a machine or implement towed by it. Includes being runover while attempting to board a moving unmanned machine.*

**Surveillance**

The ongoing systematic collection, analysis, interpretation and dissemination of health data.

# Appendix C CAISP's Agricultural Fatality Data Abstraction Form



## CAISP FATAL FARM INJURIES – DATA ABSTRACTION FORM

Please complete all fields. For fields where information is recorded as missing, please enter **99** in the database, with the exception of date fields – these should be left blank.

Coroner's File #: \_\_\_\_\_ - \_\_\_\_\_  
year no.

CAISP ID: \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_  
prov. year no.

**Agricultural Fatalities:** 1) Any unintentional injury resulting in death that occurred during activities related to the operation of a farm or ranch and/or 2) Any unintentional injury resulting in death that involved any hazard of a farm or ranch environment in Canada (excluding fatal non work-related injuries that took place in the farm residence). This includes deaths that occurred away from agricultural work locations if agricultural work was being done; e.g., transporting livestock or harvested crops on public highways. Deaths where victims were killed because a third party was engaged in agricultural work are also included.

Age: \_\_\_\_\_ Birth Date: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Birth date missing (circle)? Yes No  
mm dd yyyy

Sex (circle): M F Province: \_\_\_\_\_ County/Regional Municipality: \_\_\_\_\_

Region: \_\_\_\_\_ Date of Injury: \_\_\_\_ / \_\_\_\_ / \_\_\_\_ Weekday of Injury (circle): S M T W T F S  
mm dd yyyy

Time of Injury \_\_\_\_\_ (24:00) Date of Death: \_\_\_\_ / \_\_\_\_ / \_\_\_\_  
mm dd yyyy

Source of data for case identification (circle all that apply):

- |                 |                     |         |
|-----------------|---------------------|---------|
| 1 Coroner       | 2 Medical Examiner  | 3 Media |
| 4 RCMP / police | 5 Registrar General | 6 Other |

### A. DESCRIPTION OF INJURY EVENT

Circumstances and activity - describe with as much detail as possible the circumstances surrounding the injury event. Please include as many details as possible about 1) activity at the time of the incident, 2) task, and 3) any machinery involved in the incident.

*If the injury was not machinery or vehicle related, complete Section B and then proceed to Section E.  
 If the injury was machinery or vehicle related, begin with Section C and continue.*

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<p><b>B. CAUSE OF INJURY NOT MACHINERY OR VEHICLE RELATED</b></p> <p>1 crushed or struck by animal. Specify animal: _____</p> <p>2 other type of animal injury. Specify animal: _____</p> <p>3 fall from animal. Specify animal: _____</p> <p>4 struck by non-machine object</p> <p>5 struck against non-machine object</p> <p>6 caught inside, under or between non-machine objects</p> <p>If 4, 5 or 6, specify object: _____</p> <p>7 fall from height. Give specific fall location: _____</p> <p>8 fall on same level</p> <p>9 jumped to lower level</p> <p>10 overexertion</p> <p>11 drowning</p> <p>12 exposure to fire/explosion</p> <p>13 contact with temperature extremes</p> <p>14 contact with electric current</p> <p>16 contact with radiation, caustic, toxic or noxious substance by (circle): inhalation ingestion absorption injection</p> <p>Specify agent: _____</p> <p>18 asphyxiation by grain or soil. Specify: _____</p> <p>19 firearm</p> <p>77 other non machine related. Specify: _____</p> <p>88 unknown non machine related</p> <p>99 not applicable</p>	<p><b>C. CAUSE OF INJURY MACHINERY OR VEHICLE RELATED</b></p> <p>1 sideways rollover</p> <p>2 backwards rollover</p> <p>3 unspecified rollover</p> <p>4 entangled/caught in machinery</p> <p>5 pinned or struck by machine component or collapsing machine</p> <p>6 traffic collision on road or highway</p> <p>7 operator fell from moving machine, not runover, pinned, or struck by it</p> <p>8 operator fell from moving machine, then runover, pinned, or struck by it</p> <p>9 passenger fell from moving machine, not runover, pinned, or struck by it</p> <p>10 passenger fell from moving machine, then runover, pinned, or struck by it</p> <p>11 alighted operator/other person runover, pinned, or struck by unmanned machine</p> <p>12 alighted passenger runover, pinned, or struck by moving machine</p> <p>13 bystander runover, pinned, or struck by moving machine</p> <p>14 machine-related contact with electrical current</p> <p>15 machine related fire, explosion or burn</p> <p>16 machine collision off-road</p> <p>17 machine-related drowning</p> <p>18 struck by object falling or propelled from machine</p> <p>20 runover, pinned, or struck by moving machine - unspecified</p> <p>77 other machine related. Specify: _____</p> <p>88 unknown machine related</p> <p>99 not applicable</p> <p>If 5 or 18, specify object/component: _____</p>	<p><b>D. TYPE OF MACHINERY</b></p> <p>(Circle appropriate number if the injury event was machinery or vehicle related)</p> <p>1 tractor</p> <p>2 auger. Specify whether freestanding, attached to machine, or unknown (circle)</p> <p>3 mower</p> <p>4 power take off, specify machine PTO attached to: _____</p> <p>5 baler</p> <p>6 farm wagon/trailer</p> <p>7 combine</p> <p>8 power tool (not chainsaw)</p> <p>9 chainsaw</p> <p>10 welder</p> <p>11 harvester</p> <p>12 plough/disk</p> <p>13 hay elevator</p> <p>14 manure spreader</p> <p>15 bulldozer, bob cat, skid steer</p> <p>16 motor vehicle. Specify: _____</p> <p>17 off-road vehicle. Specify: _____</p> <p>19 fencing equipment</p> <p>20 spraying equipment</p> <p>22 garden equipment</p> <p>24 planting equipment</p> <p>25 swather</p> <p>77 other farm implement/machine. Specify: _____</p> <p>88 unknown</p> <p>99 not applicable</p>
<p><b>E. IMMEDIATE LOCATION OF INJURY</b></p> <p>1 Field (includes dry ditches next to field)</p> <p>2 Barn</p> <p>3 Silo/grain bin, (circle)</p> <p>4 Shed</p> <p>5 Farmyard</p> <p>6 Road/highway (includes dry ditches)</p> <p>7 Driveway (includes dry ditches)</p> <p>8 Farm house</p> <p>9 Farm road (includes dry ditches)</p> <p>10 Woods, orchard</p> <p>11 Water source; includes water-filled ditch, dugout, manure lagoon, sewage pit, etc. Specify: _____</p> <p>12 Corral/outdoor animal enclosure</p> <p>77 Other location. Specify: _____</p> <p>88 Unknown</p> <p><b>F. LOCATION OF DEATH</b></p> <p>1 Found dead</p> <p>2 Died <i>en route</i></p> <p>3 Died in hospital</p> <p>77 Other location of death. Specify: _____</p> <p>88 Unknown</p>	<p><b>G. RELATIONSHIP OF INJURED PERSON TO FARM OWNER/OPERATOR</b></p> <p>1 Operator</p> <p>2 Spouse of farm operator</p> <p>3 Child of farm operator</p> <p>4 Other relative of farm operator. Specify: _____</p> <p>5 Hired worker</p> <p>6 Spouse of hired worker</p> <p>7 Child of hired worker</p> <p>8 Other relative of hired worker. Specify: _____</p> <p>9 Other non-visiting child</p> <p>10 Other non-visiting adult</p> <p>11 Adult visitor or contractor</p> <p>12 Child visitor</p> <p>77 Other relationship. Specify: _____</p> <p>88 Unknown</p>	<p><b>H. METHOD OF DISCOVERY</b></p> <p>Who found the deceased? (i.e. relationship to deceased) _____</p> <p>Was the fatality witnessed? (circle) Y N (Indicate if information not available)</p> <p><b>I. NATURE OF INJURY BY BODY PART</b> e.g., N11 crush injury, BP1 chest. (List from most to least serious injury, where the most serious injury was the cause of death.)</p> <p><b>Nature of injury 1:</b> _____</p> <p><b>Body part 1:</b> _____</p> <p><b>Nature of injury 2:</b> _____</p> <p><b>Body part 2:</b> _____</p> <p><b>Nature of injury 3:</b> _____</p> <p><b>Body part 3:</b> _____</p>

J. WAS AN EXTERNAL CAUSE OF INJURY CODE GIVEN? If so, specify: \_\_\_\_\_

K. REVIEW FOR CONSENSUS? (Circle) Yes No If yes, please explain the points needing consensus of opinion.



## Appendix D Denominator Data

### Canadian Farm Population by Age Group and Province: Statistics Canada, Census of Agriculture 1996

Province	Age Group												Total
	< 1 yr	1 - 4	5 - 9	10 - 14	15 - 19	20 - 29	30 - 39	40 - 49	50 - 59	60 - 69	70 - 79	80+ yrs	
NL	5	10	115	130	200	170	225	405	210	105	85	25	1680
PE	65	335	620	660	725	1040	1110	1080	1095	580	420	80	7810
NS	100	580	1040	1260	975	1335	1690	2200	1960	1245	475	205	13060
NB	110	380	725	1020	995	1030	1320	1890	1290	925	485	185	10350
QC	1225	6205	9820	11315	11460	12380	18195	18485	14690	7165	2780	880	114605
ON	2165	10925	17510	21180	20440	23005	29635	34840	29020	20650	9510	2345	221225
MB	935	4575	7265	8170	7155	7950	11585	13015	9680	6260	2545	700	79835
SK	1295	6645	11335	14855	15055	11635	19860	25255	18180	14260	5930	1245	145560
AB	2250	10570	16835	18700	17540	16670	28085	30020	24065	16205	6185	1370	188510
BC	670	3085	5765	6735	5895	5550	9535	12240	9940	6220	2415	725	68770
<b>CANADA</b>	<b>8810</b>	<b>43315</b>	<b>71035</b>	<b>84025</b>	<b>80455</b>	<b>80775</b>	<b>121230</b>	<b>139425</b>	<b>110135</b>	<b>73620</b>	<b>30825</b>	<b>7755</b>	<b>851405</b>

Note: Statistics Canada randomly rounds category totals up or down by a factor of five.

### Number of Farms by Province: Statistics Canada, Census of Agriculture 1996

Province	Number
Newfoundland	742
Prince Edward Island	2,217
Nova Scotia	4,453
New Brunswick	3,405
Québec	35,991
Ontario	67,520
Manitoba	24,383
Saskatchewan	56,995
Alberta	59,007
British Columbia	21,835
<b>CANADA</b>	<b>276,548</b>

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## Appendix F References

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