

SECTION

1

***Agricultural Machinery
Safety Basics***



1.1

THE WORK ENVIRONMENT

LEARNING GOALS

- ◇ Understand the variability of agriculture and how this relates to farm safety and health
- ◇ Identify factors and situations that contribute to agricultural hazards and risks

RELATED TASK SHEET

- ◇ 1.2: Alberta Safety and Health Regulations

Agriculture is more diverse than most people think.

Introduction

Work on a farm or ranch is different from work in other industries. Many of these differences increase your chance of being injured.

This section reviews why and how working on a farm or ranch can be different from other jobs, and why these differences increase hazards and risk of injury.

Farm Differences and Safety

A farm is defined as a place where agricultural products are produced and sold or normally would have been sold.

Alberta has about 20 Mha (50 Mac) of farmland. Farm and ranch size varies considerably, and they produce a wide variety of products ranging from crops to livestock. Field crops include wheat, canola, and barley to name a few. Other crops produced include vegetables, such as potatoes, corn, and peas.



Figure 1.1 Agricultural work is done under changing conditions. Often the work is done hurriedly to beat the approaching storm. Safety must be a major priority. Credit: Michael Houtz, Penn State Extension.

Livestock production may include beef, dairy, hog, sheep, and poultry. Some may specialize in llamas, buffalo, or bees. Many farms and ranches engage in diversification by producing a combination of different crops, livestock, and/or services. Farming and ranching activities can occur in a variety of terrain and weather conditions. Some activities may involve operating equipment on flat, level surfaces, while other activities will likely be conducted on slopes. Some work occurs where there are buildings that protect against the cold, wind, snow, or rain; however, most work will expose you to heat, rain, cold, and wind.

All these differences make it hard to find universal ways to reduce your chance of injury. However, planning and preparation will help you avoid the hazards and risks associated with this important work.

Farm or ranch work includes many characteristics and factors that increase the risk of injury.

Unique Characteristics

There are many ways to organize the information that describes why farm or ranch environments are different from other types of work environments. One of the simplest ways is to list the three main characteristics that make these environments different from other types of work environments:

1. A lack of uniformity and control of workplaces and work activities
2. An overlap of home and work sites
3. Many are operated by family members using labour without age-related restrictions

Factors That Affect Safety

The three main characteristics previously listed are simple to learn, but they are factors that explain why agriculture remains so hazardous. Hazards and risks continue to be difficult to eliminate or control. The factors that influence farm/ranch work and risk of injury are:

- ◇ environmental
- ◇ personal
- ◇ work activity
- ◇ social, economic, and political

These factors are explained in greater detail in the following tables. Review these tables for an understanding of why so many hazards and risks remain a part of farming.

Table 1.1.a. Environmental Factors That Influence Farm Work and Risk of Injury

FACTOR	RISK
Weather	Farm or ranch work must often be completed regardless of weather extremes.
Work sites	Work sites commonly overlap with residences.
Emergency services	Emergency services are not readily available, which often results in a delayed response due to isolation of the work site.
Isolation of work	Coworkers are often not within eyesight or hearing distance when trouble occurs.
Environmental hazards (noise, vibration, lighting, dust, etc.)	Hazards and exposures are not monitored or regulated in agriculture like they are in most hazardous industries.

Table 1.1.b. Personal Factors That Influence Farm Work and Risk of Injury

FACTOR	RISK
Young workers	Youth younger than 16 years old are commonly exposed to and interact with work hazards and environments that are beyond their normal physical, mental, and/or emotional abilities to respond to safely.
Senior workers	There is no standard retirement age in agriculture. This results in farmers with significant physical limitations and slow reaction times continuing to work in high-risk situations.
Minimal physical limits	Initial physical exams or minimum performance requirements are often required to begin or continue work in other hazardous occupations.
Physical exams	Routine medical surveillance is not common.
Special care for physical or mental conditions	Special care is not available or only available by self-imposed restrictions. These issues are tightly controlled in other hazardous occupations.
Transfers to light duty	Transfer of workers to light duty is usually not an option in agriculture.
Dispersion of workforce	It is difficult to provide health and safety services because of geographic dispersion and mobility of the workforce.
Diverse operator characteristics	Operators' education and experience can vary; some work full time, others work significant hours off the farm, and some work full time off the farm with farming or ranching serving as supplemental income.

Table 1.1.c. Work Activity Factors That Influence Farm Work and Risk of Injury

FACTOR	RISK
Work hours	Work weeks of 60 to 80 hours are common in agriculture.
Labour and management functions	Usually, these jobs represent separate functions in other hazardous occupations, but not in farming or ranching.
Work pace	The work pace can be highly erratic rather than steady and is frequently affected by weather situations and machinery breakdowns.
Work routine	The work routine can be highly irregular with many tasks being seasonal or done once or twice per season or year.
Specialization	Specialization is not normally possible; the phrase “jack-of-all-trades” often applies.
Instructions	Farmers and ranchers often learn their trade by observation and experience.
Holidays and vacations	Days off are normal for most occupations, but not for the farm or ranch worker.
Labour demands	Operations frequently make use of any temporarily available labour, such as spouses, children, friends, visitors, new acquaintances, and off-the-street employees.
Uncertainty	Farming and ranching are characterized by an uncertain financial future. Weather, broad economic policy, and unexpected world events can result in financial hardship.
Agriculture production	Size and type of farm and the technology used can vary greatly, which makes grouping the types of modern agriculture difficult.

Table 1.1.d. Social, Economic, and Political Factors That Influence Farm Work and Risk of Injury

FACTOR	RISK
Lifestyle versus occupation	Farming is commonly viewed as a “way of life” rather than as an occupation. Some engage in production agriculture as a hobby or lifestyle statement.
Childcare	Childcare is often not available, practical, or affordable in rural areas, which results in parents babysitting infants, toddlers, preschoolers, and other children while completing farm work.
Cultural beliefs about farm safety and health	There is a cultural belief that farming is a hazardous and unpredictable occupation. This contributes to the belief that little can be done about safety and health except to be careful.
Market forces	Market demands often set the price of commodities produced. Farmers or ranchers often cannot add the costs of safety and health to products to recoup costs.
Self-reliance for safety	Individuals rely primarily on their own knowledge and awareness of hazards to work safely, and often accept blame when an injury occurs, especially when they commit an unsafe behavior that directly results in an injury.
Enculturation	Children are taught values, responsibility, good work ethics, decision making, and about life and death. Strong bonds among children, parents, grandparents, neighbours, and communities are developed and nourished from the shared experiences of farming or ranching.

Safety Activities

1. Refer to the tables in the task sheet and determine how many of these characteristics and factors are present on the farms where you live or work. Discuss these with your parents, instructor, mentor, or supervisor.
2. Show the previous tables to one or two area farmers and have them identify how many factors may have contributed to a farm work injury to themselves or someone on their farm.
3. How many of these factors might be present in non-farm-work environments? Are there any occupations with high numbers of serious injuries that have as many of these factors as farming? Discuss these with your parents, instructor, mentor, or supervisor.

ALBERTA SAFETY AND HEALTH REGULATIONS

LEARNING GOAL

- ◇ Become aware of the regulations that affect agricultural workers

RELATED TASK SHEETS

- ◇ 1.2.1: Employment Standards: Farm and Ranch
- ◇ 1.2.2: Employment Standards: Youth Employment Laws
- ◇ 1.2.3: Farm Freedom and Safety Act
- ◇ 1.2.4: Occupational Health and Safety: Farm and Ranch
- ◇ 1.2.5: Workers' Compensation Board: Farming Coverage
- ◇ 1.2.6: The Traffic Safety Act
- ◇ 1.2.7: Youth Worker Guidelines

Introduction

There are many regulations that affect tractor operators and even some special regulations for young tractor operators and for farms and ranches. These include employment standards, occupational health and safety regulations, and worker's compensation and insurance, as well as traffic safety regulations to mention a few. These regulations are complicated, and it is important that operators and their supervisors are aware of the most recent and applicable regulations so they can respond accordingly. In the following subsections, some of the most applicable Alberta regulations are briefly described based on information obtained from various qualified sources. It is important for the reader to understand that these are not the complete regulations and that updates may have occurred since these were put in this manual. **Therefore, it is the responsibility of the supervisor to ensure the most recent and all applicable regulations are complied with.**

Following are highlights of regulations included in this manual:

- ◇ Employment Standards: Farm and Ranch
- ◇ Employment Standards Rules: Youth Employment Laws
- ◇ Farm Freedom and Safety Act
- ◇ Occupational Health and Safety: Farm and Ranch
- ◇ Workers' Compensation Board: Farming Coverage
- ◇ The Traffic Safety Act
- ◇ Youth Worker Guidelines

1.2.1

EMPLOYMENT STANDARDS: FARM AND RANCH

The following farm and ranch employment standards excerpts were obtained from the following Alberta government website link: <https://www.alberta.ca/farm-and-ranch-employment-standards.aspx>

Overview

Employment standards legislation sets minimum requirements for hours of work, overtime, overtime pay, holidays and general holiday pay, vacations, vacation pay, minimum wage, and employees under the age of 18.

Who's Affected

Employment standards only apply to farms and ranches with six or more waged, non-family employees who have worked at least six consecutive months. Operations with five or fewer waged, non-family employees are exempt from employment standards.

Rules do not apply to:

- ◇ farm owners or their spouses, common-law partners, or adult-interdependent partners
- ◇ family members of farm owners or their spouses, common-law partners, or adult-interdependent partners
- ◇ non-employee relatives, friends, and neighbours helping out
- ◇ children doing chores or participating in activities such as 4-H or helping neighbours and friends
- ◇ participating in recreational activities such as hunting on farmland

Exceptions to Employment Standards

The following special rules apply to waged, non-family workers on farms and ranches that employ six or more such workers for at least six consecutive months:

- ◇ Hours of work and overtime — farms and ranches are not subject to the current standards on hours of work and overtime due to the extended working hours required during harvest and seeding.
- ◇ Rest periods — employees are entitled to four days of rest for every 28 days of work. Selection of the days of rest is at the employer's discretion if the employer and employee can't agree.

Family Members

Employment standards do not apply to family members of the owner or owner's spouse, common-law partner, or adult-interdependent partner. Owner means a shareholder, sole proprietor, or partner.

All the following are considered family members:

- ◇ child, step-child
- ◇ parent, step-parent
- ◇ sibling, half-sibling, step-sibling
- ◇ grandparent, step-grandparent
- ◇ aunt, uncle, step-aunt or uncle
- ◇ niece, nephew
- ◇ first cousin

Youth Workers

Alberta's youth employment rules do not apply to farms and ranches, but they do apply to some agricultural business operations.

1.2.2

EMPLOYMENT STANDARDS RULES: YOUTH EMPLOYMENT LAWS

The following employment standards rules for youth employment was extracted from the following Alberta government website link: <https://www.alberta.ca/youth-employment-laws.aspx>

Employees under 18 years old have specific rules under Alberta's laws.

Basic Rules

- ◇ There are restrictions on the jobs that people under 18 years of age can do.
- ◇ There are also restrictions on the hours when people under 18 years of age are allowed to work.
- ◇ There are some important exceptions:
 - a. The rules listed on this page do not apply to working on farms and ranches. Youth follow the same rules as other farm and ranch employees.
- ◇ All employees, including those under 18 years of age, are entitled to the minimum standards of employment, such as general holidays, vacations, minimum wage, and termination notice or pay.
- ◇ As with all employees in Alberta, employers of people under 18 years of age need to perform hazard assessments and control workplace hazards.

Employees Aged 13 to 14 Years

Parent or guardian consent is required for all jobs, and on some jobs, a permit is required.

Employees Aged 15 to 17

May be employed in any type of work:

- ◇ No permits are required.
- ◇ Parent or guardian consent is only required to work during restricted hours.

Restrictions on hours of work:

- ◇ Employees who are 15 years of age cannot work during regular school hours unless enrolled in an off-campus education program.
- ◇ Employees 15 to 17 years of age who work in retail or hospitality (as listed below) can only work between 9:00 p.m. and 12:00 a.m. with adult supervision. They cannot work between 12:01 a.m. and 6:00 a.m.
- ◇ Employees 15 to 17 years of age who work in jobs that are not in retail or hospitality can work between 12:01 a.m. and 6:00 a.m. However, they require:
 - a. parental or guardian consent
 - b. adult supervision

In employment relationships, employees provide services to employers for pay. Employers typically make mandatory deductions and provide entitlements such as vacation time/vacation pay.

Hazard Assessments

It is important to remember that all Employment Standards and Occupational Health and Safety legislation applies to the employment of people under 18 years of age.

This continues to include the requirement for all employers to perform hazard assessments. Resources are available to help employers understand the process of doing hazard assessments:

Identifying hazards is just the first step in being safe at work. Employers are responsible for continually measuring risks and developing appropriate controls of hazards.

How the Law Applies

Part 2, Division 9 of the Employment Standards Code and Part 5 of the Regulation outline the rules for employing people under 18 years of age.

Disclaimer: In the event of any discrepancy between this information and Alberta Employment Standards legislation, the legislation is considered correct.

1.2.3

FARM FREEDOM AND SAFETY ACT

The following information excerpts on the Farm Freedom and Safety Act was obtained from the government of Alberta at the following website link: <https://www.alberta.ca/farm-and-ranch.aspx>

The government of Alberta introduced new legislation that will impact Alberta producers. Bill 26 also known as the Farm Freedom and Safety Act (FFSA) changes current employment, workers' compensation coverage, and occupational health and safety requirements for producers. The following guide will serve as a brief overview of how these changes will impact you.

Overview

The new rules only apply to farm and ranch operations that employ waged, non-family workers. They do not apply to owners or their family members.

Who's Affected

Alberta farm and ranch producers with waged workers who are not the owner or related to the owner are affected by the legislation.

This means family members can still participate in farming operations as they always have, and neighbours can still volunteer to help each other out.

Who's not affected:

- ◇ farm families who do not have any waged, non-family workers
- ◇ unpaid farm and ranch workers, such as relatives, friends, and neighbours helping on the family farm
- ◇ children doing chores or participating in 4-H

The Act also does not apply to recreational activities, such as hunting on farmland.

Labour Relations

The Farm Freedom and Safety Act exempts farms and ranches from labour relations laws.

How Does the Act Impact My Farm?

Below is a brief snapshot of some parts of the Occupational Health and Safety Act that will be important to your farm operations.

PART 1: OBLIGATIONS (RESPONSIBILITIES)

- ◇ Establishes the specific responsibilities for employers, supervisors, workers, suppliers, service providers, owners, contractors, prime-contractors, self-employed persons, and temporary staffing agencies.

PART 2: DUTY TO INFORM (RIGHT TO KNOW)

- ◇ Employers must provide information that may affect the health and safety of workers including information about the hazards, hazard controls, and work practices and procedures used on the farm.

PART 3: JOINT WORK SITE HEALTH AND SAFETY COMMITTEES AND HEALTH AND SAFETY REPRESENTATIVES (RIGHT TO PARTICIPATE)

- ◇ Outlines the specific requirements for establishing a health and safety representative or joint work site health and safety committee.

PART 4: DANGEROUS WORK AND DISCRIMINATORY ACTION (RIGHT TO REFUSE DANGEROUS WORK)

- ◇ Workers have the right to refuse dangerous work.

PART 5: PROGRAM AND PRACTICE

- ◇ Farms with 20 or more workers are required to establish a health and safety program in consultation with their joint work site health and safety committee. This part also describes the circumstances of when an incident must be reported to Occupational Health and Safety.

PART 8: COMPLIANCE AND ENFORCEMENT

- ◇ Outlines the role of Occupational Health and Safety officers and what measures they can take for compliance and enforcement.

PART 10: OFFENCES AND PENALTIES

- ◇ Outlines the circumstances of when someone could be found guilty of an offence under the Act and the associated penalties.

1.2.4

OCCUPATIONAL HEALTH AND SAFETY: FARM AND RANCH

The following information excerpts on occupational health and safety for the farm and ranch was obtained from the Alberta government website link: <https://www.alberta.ca/farm-and-ranch-ohs.aspx>

Waged, non-family farm and ranch workers are protected under basic safety standards in the OHS Act as of January 31, 2020.

Overview

The Occupational Health and Safety (OHS) Act sets the minimum standards for protecting waged, non-family farm and ranch workers.

- ◇ Employers must ensure the health and safety of workers on the site, as far as is reasonably practicable.
- ◇ Workers must work safely and cooperate with their employer to keep the workplace safe.

Who's Affected

Farms and ranches with at least one waged, non-family worker are covered by the basic safety standards set out in the OHS Act. Farms and ranches with joint health and safety committees or health and safety representatives must comply with specific rules for committees and representatives in the OHS Code. The other parts of the OHS Code and the OHS Regulation do not apply to farms and ranches.

For farms and ranches, training is required only for committee co-chairs and representatives and not for committee members.

This includes the above farm and ranch operations involved with:

- ◇ production of crops, including fruits and vegetables, through the cultivation of land
- ◇ raising and maintenance of animals or birds
- ◇ keeping of bees

The following are not considered farm and ranch operations in relation to OHS:

- ◇ processing of food or other products from the operations referred to above
- ◇ operation of greenhouses, mushroom farms, nurseries, or sod farms
- ◇ landscaping
- ◇ raising or boarding of pets

OHS rules only apply to an operation if a waged, non-family worker is present on the farm or ranch, and then only to those individuals.

OHS rules do not apply:

- ◇ to family members of the owner of a farm or ranch operation
- ◇ to the private residence, which includes areas around the home like the lawn area, backyard, or garden
- ◇ when people are doing non-work-related activities on their land, such as recreational activities like horseback riding or hunting

Family and friends can continue contributing to farming operations as they always have, and neighbours can still volunteer to help each other out.

A family member is defined as:

- ◇ the spouse or adult-interdependent partner of the farm or ranch owner
- ◇ or a child, parent, grandparent, sibling, aunt, uncle, niece, nephew, or first cousin of the farm or ranch owner. This relation can be by blood, marriage, or adoption, or by virtue of an adult-interdependent relationship.

Basic Safety Standards

Producers with waged, non-family workers must:

- ◇ follow generally acceptable industry standards
- ◇ apply general health and safety principles

Basic Rights

Workers have three basic rights:

1. The right to refuse dangerous work
2. The right to know of potential hazards and have access to basic workplace health and safety information
3. The right to participate in workplace health and safety

INVESTIGATIONS AND INSPECTIONS

OHS officers are authorized to investigate serious injuries or deaths of paid, non-family workers. Such investigations could involve reviewing health and safety procedures, condition of equipment, availability of training, etc.

OHS does not investigate non-paid or non-work-related incidents. However, an owner may request an investigation of an incident involving a resident to help determine what went wrong and provide information to help prevent similar incidents from happening elsewhere.

OHS officers may inspect farms that do not meet basic standards. However, inspectors cannot conduct those inspections without a cause. Cause includes a complaint, a fatality, a serious injury, or a record of unsafe behaviours.



Figure 1.2.4.a. The business of farming presents daily exposure to hazards. Livestock, machinery, and the environment present safety concerns. OHS regulations may limit inspections of farms, but safe work habits and workplace conditions must be made a daily concern. Credit: Michael Houtz, Penn State Extension.

1.2.5

WORKERS' COMPENSATION BOARD: FARMING COVERAGE

The following information excerpts on Workers' Compensation Board (WCB) farm coverage was obtained from the WCB website link:

<https://www.wcb.ab.ca/insurance-and-premiums/types-of-coverage/farming-coverage/>

Effective Jan. 31, 2020, the Farm Freedom and Safety Act (FFSA)* impacts workplace insurance requirements for farm and ranch owners.

What Does This Mean to You?

The FFSA introduced two main changes that may impact your workplace insurance requirements as an employer:

1. Coverage for large employers: Employers with six or more employees are required to ensure their waged workers are covered either through WCB or private insurance.
2. Coverage for small employers: Employers are not required to have workplace insurance if they have five or fewer employees or hire workers for less than six consecutive months. If a small employer chooses to take out coverage, they can do so through WCB or private insurance.

Coverage for family members and non-waged workers remains optional.

***Note: Under the legislation, workers' compensation requirements for greenhouses, nurseries, mushroom, and sod farms remain mandatory.**



Figure 1.2.5.a. Report all injuries no matter how small.
Credit: National Children's Center for Rural and Agricultural Health and Safety.

How Does Workers' Compensation Board (WCB) Coverage Benefit You and Your Workers?

There are several unique aspects of WCB coverage to consider when comparing insurance providers.

- ◇ WCB protects workers and employers against financial loss in the event of a work-related injury or death through no-fault disability insurance. This means that regardless of who may be at fault for an accident, WCB assumes the liability for a workplace injury or fatality, and parties covered by WCB are provided immunity against lawsuits.
- ◇ There are also no preset limits to the benefits that are provided to injured workers. An injured worker will continue to receive coverage for wage loss, medical treatment, prescriptions, and more for as long as there is any remaining disability.
- ◇ Proprietors, partnerships, and/or directors of incorporated farms also may take out optional personal coverage for themselves. Personal coverage will provide them with benefits if injured at work, as well as provide them with personal immunity from lawsuit for workplace injuries. Without this coverage in place, they are not entitled to benefits and may be subject to lawsuit.

1.2.6

THE TRAFFIC SAFETY ACT

The following information excerpts on the Traffic Safety Act as applied to farm tractors and implements was obtained from the government of Alberta website link: [https://www1.agric.gov.ab.ca/\\$Department/deptdocs.nsf/all/aet12593/\\$FILE/AF_SafeTransportationofFarmEquipment_WEB.pdf](https://www1.agric.gov.ab.ca/$Department/deptdocs.nsf/all/aet12593/$FILE/AF_SafeTransportationofFarmEquipment_WEB.pdf)

Introduction

This section provides general information and clarification of the laws that apply to farm vehicles and equipment in Alberta. It contains details on sections of the Traffic Safety Act that relate to farm vehicles and equipment. This section does not describe all the laws that apply. For complete details, refer to the appropriate sections of the Traffic Safety Act and regulations and any other applicable acts and regulations.

Responsibility for Meeting Regulated Requirements

As an equipment operator and owner, you are responsible for ensuring that your equipment meets regulated requirements. You are also responsible for maintaining lighting and marking equipment on your implements to ensure they continue to meet the requirements. Equipment transported on roads during the day or night must be marked and lit according to the requirements and regulations of the Alberta Traffic Safety Act.

Daytime Travel

Daytime travel is defined in the *Use of Highway and Rules of the Road Regulation* as “the period that starts one hour before sunrise and ends one hour after sunset.” However, when atmospheric conditions such as snow, rain, fog, or smoke do not allow enough light to clearly see a person at a distance of 150 m (490 ft.), then equipment must meet the requirements for nighttime conditions.

Nighttime Travel

Nighttime or darkness is defined by the *Use of Highway and Rules of the Road Regulation* as “the period commencing one hour after sunset and ending one hour before the following sunrise, or when atmospheric conditions (such as snow, rain, fog, smoke) do not allow enough light to clearly see a person at a distance of 150 m (490 ft.).”



Figure 1.2.6.a. Know the rules for taking a farm tractor and implement onto public roadways. Credit: Penn State Extension, Ag Safety Team

Summary

- ◇ Clear guidelines have been established regarding proper forward and rearward lighting as well as markings and flags that are required on tractors and implements when travelling on roads. task sheet 3.5 provides detailed guidance.
- ◇ Motorists unaccustomed to large and slow-moving farm and industrial equipment need to be alerted to your position on the road and your slow travel speed.
- ◇ When you purchase lighting and marking equipment, make sure it meets the appropriate Canadian Standards Association (CSA), American National Standards Institute / American Society of Agricultural and Biological Engineers (ANSI/ASABE), or Society of Automotive Engineers (SAE) standards.

1.2.7

YOUTH WORKER GUIDELINES

Farming offers a unique opportunity for young people to learn the value of hard work, how to handle responsibilities, and how to set priorities. Traditionally, farming has been a family affair with children working alongside family members on the farm. Large farms may hire youth for work as well. While farm labour has many personal development benefits, there are also many risks involved for young workers

The Ag Youth Work Guidelines help parents and employers determine what tasks are appropriate. These guidelines were developed under the direction of the United States National Children Center for Rural and Agricultural Health and Safety in consultation

with researchers and safety professionals from the United States and Canada. Employers should be aware of these guidelines. The guidelines provide agricultural task assignment recommendations for youth based on research and take into consideration:

- ◇ child growth and development
- ◇ acceptable agricultural practices
- ◇ child injury prevention
- ◇ agricultural safety guideline categories that include tasks ranging from small utility tractors to large articulated tractors

Everyone develops differently. As you gain more experience, your skills and knowledge will continue to develop. It is important to understand your limitations as you develop towards adulthood. Refer to the following table to review the recommended relation between age and the size and complexity of tractor operations.



Tractor Operation Chart

Guidelines for Safe Operation of Tractor

- **Tractors have**
 - o Wide front ends
 - o Roll Over Protective Structure (ROPS) and seatbelt
 - o All safety features in place
- **Youth**
 - o Perform pre-operational check with adult
 - o Can reach all controls while wearing seatbelt
 - o Does not have extra riders on the tractor
 - o Operates tractor only in daylight and during good weather
 - o Avoids steep slopes and driving near ditches, trees and fences



Refer to the specific guideline for recommended supervision	Size of Tractor			
	UTILITY	SMALL 20hp to 70hp	MEDIUM-LARGE more than 70hp	ARTICULATED
Operating a Farm Tractor (no equipment attached)	14 - 15 years	14 - 15 years	14 - 15 years	16+ years
Tried Implements	14 - 15 years	14 - 15 years	14 - 15 years	16+ years
3-Point Implements	14 - 15 years	14 - 15 years	14 - 15 years	16+ years
Remote Hydraulics	14 - 15 years	14 - 15 years	14 - 15 years	16+ years
PTO-Powered Implements	14 - 15 years	14 - 15 years	14 - 15 years	16+ years
Tractor-Mounted Front-End Loader	14 - 15 years	16+ years	16+ years	16+ years
Working in an Orchard	14 - 15 years	16+ years	16+ years	16+ years
Working Inside Buildings	14 - 15 years	16+ years	16+ years	16+ years
Driving on Public Roads*	N/A	16+ years	16+ years	16+ years
Pulling Oversize or Overweight Loads	Due to increased hazard and complexity, these jobs should NOT be assigned to youth.			
Hitching Tractor to Move Stuck/Immovable Object				
Simultaneous Use of Multiple Vehicles				
Additional Persons on a Trailing Implement				
Pesticide or Anhydrous Ammonia Application*				

* follow state/province laws



<https://doi.org/10.21636/nfmc.nccrahs.youthwork.tractorschart.g.2017>

Figure 1.2.7.a. Tractor Operation Chart. Credit: National Farm Medicine Center (NFMC) and National Children’s Center for Rural and Agricultural Health and Safety (NCCRAHS).

1.3

INJURIES INVOLVING YOUTH

LEARNING GOAL

- ◇ Learn about the numbers and types of injuries associated with youth working in agriculture

RELATED TASK SHEETS

- ◇ 1.2: Alberta Safety and Health Regulations
- ◇ 1.2.7: Youth Worker Guidelines

If you work in production agriculture, don't become part of the injury statistics.

Introduction

“I’m always careful! I’ll never suffer a work injury!” You may say this to yourself as you begin to read this task sheet. But this same thinking is what injures and kills hundreds of people on farms and ranches.

This task sheet looks at the numbers of youth fatalities and injuries that have caused great concern in farming and ranching.

The Situation

The fatal work injury rate per 100,000 workers regularly ranks agriculture among the most hazardous industries in Canada. The agriculture industry often records numerous injuries and fatalities to youth. Unlike agriculture, other industries, like mining and construction, have regulations that do not allow youth younger than 16 years old to work in hazardous occupations.

Youth Farm Injury Statistics

Accurate numbers of youth work fatalities and injuries are difficult to determine because youth do not work regularly enough or in large enough numbers to be counted in most official injury statistics. Nevertheless, some concerning statistics are available.

The Canadian Agricultural Injury Reporting (CAIR) data shows that agriculture injuries, are not due to random or isolated “accidents.” There are many recurrent patterns of injury.

From 1990–2009, in all age groups in Alberta:

- ◇ 355 Albertans were killed in agricultural injury events.
- ◇ 68% of the agricultural fatalities involved machines.
- ◇ The top five causes of agricultural fatalities were machine runovers (16%), machine rollovers (16%), pinned or struck by a machine (13%), animal-related (9%), and machine entanglements (8%).