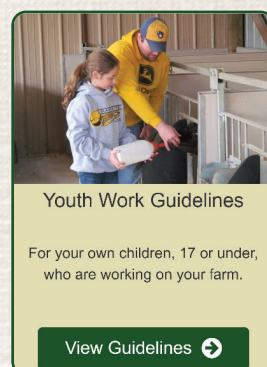


#### Additional Agricultural Youth Work Guidelines Available:

Agricultural Youth Work Guidelines are available for over 50 tasks, including work basics, haying, dairy, gardening, working with animals, operating equipment and many others. New guidelines are also available for some tasks such as operating unmanned aerial vehicles (UAVs) and greenhouse work. All the guidelines are available in three languages (English, Spanish and French) and in multiple formats (interactive, read, print and view/download). Print and view formats enable users to modify skin tones and equipment colors.

Visit [CultivateSafety.org/Work](https://CultivateSafety.org/Work) to access the guidelines.



To access the guidelines, click on "View Guidelines" in the Youth Work Guidelines box. This will take you to a search page where you can search the full set of guidelines, using built in filters to refine your search.

#### Supervision



Learn More →

Content on supervision, child development, benefits of farm work and creating a communication plan can also be accessed from the [CultivateSafety.org/Work](https://CultivateSafety.org/Work) page. Simply scroll down and click the appropriate content box.

## SAFETY GUIDELINES FOR YOUTH OPERATING FARM EQUIPMENT



**Funding:**  
Funding provided by CHS Community Giving and through the National Children's Center for Rural and Agricultural Health and Safety via the National Institute for Occupational Safety and Health (grant number U54 OH009568).





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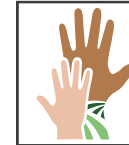
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### ACKNOWLEDGEMENTS:

We wish to thank many people for their contributions to this project; Dr. David Schwebel for his assistance with child development content, Dr. Dennis Murphy for his assistance with youth work and agricultural environment content, Amy Marg and Matt Pilz for their assistance with the guidelines, and the staff at the National Farm Medicine Center for their valuable feedback on the content and design. Special thanks to Ben Bauer for the design of the booklet.

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# Using Farmstead Equipment (silo unloader, bunk feeder, grain auger, conveyor)

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie back long hair
- Ensure there are no extra people in the work area
- Walk through area and identify obstacles to eliminate/avoid
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- **Mature** enough to consistently do what is expected
- **Think through** actions and consequences before acting
- Good **peripheral vision**
- Stay focused on a task for up to 50 minutes
- Understand and consistently repeat a 5 step process
- Reach and operate controls from a balanced, standing position
- Lift objects, using **proper lifting technique**
- Strength to maneuver cart without straining or hitting obstacles
- Safely demonstrate the job 4 to 5 times
- Maintain **two-way communication** link
- Change clothing and wash hands after completing job



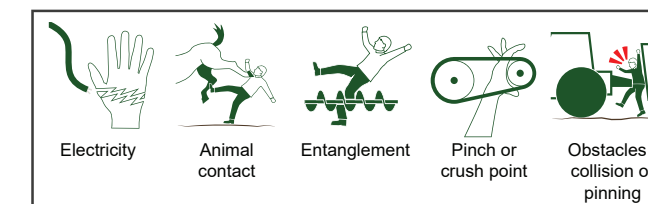
## Adult Responsibilities

- Comply with the **working outdoors guideline**
- Verify ventilation system is working properly
- Ensure equipment is mechanically sound with **safety features** in place, and demonstrate proper use
- Verify the absence of extra people in the work area
- Ensure youth is aware of and able to avoid obstacles
- **Fit youth** for a respirator and demonstrate proper use, if needed
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Provide appropriate training
- Train youth to call an adult if equipment malfunctions

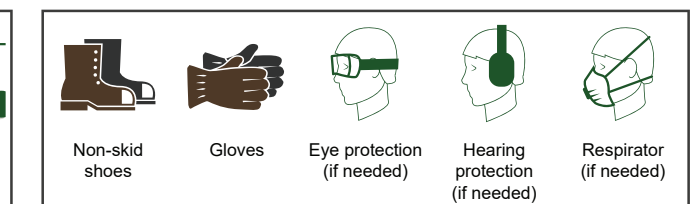
## Supervision

12-13 yrs	Constant supervision
14-15 yrs	Constant supervision progressing to intermittent
16+ yrs	Intermittent supervision progressing to periodic

## Hazards



## Protective Strategies





# Unloading Grain and Silage

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie up long hair
- Read, understand and follow the operator's manual
- Check for/avoid people and obstacles in the worksite
- **Good peripheral vision**
- Bend, lift objects, and climb safely using **proper technique**
- Mount and dismount tractor using 3 points of contact
- Operate auger motor and gravity box chute without excessive strain
- Understand and consistently repeat a 10-step process
- Recognize hazards, problem solve, and respond appropriately
- React quickly to hazards
- Understand dangers of flowing grain
- **Think through** actions and consequences before acting
- **Mature** enough to consistently do what is expected
- Safely demonstrate the job 4 to 5 times
- Maintain **two-way communication** link



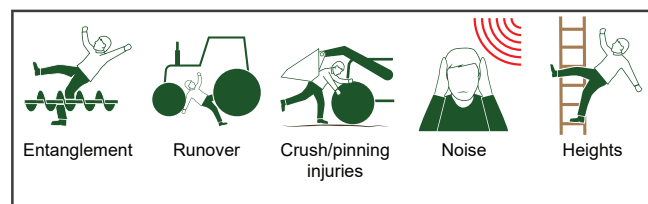
## Adult Responsibilities

- Comply with the **working outdoors guideline**
- Ensure equipment is **mechanically sound** and **safety features** are in place
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Ensure weight lifted is less than 25% of youth's body weight
- Demonstrate how to safely unload grain and silage
- Provide appropriate training
- Educate youth on how and when to use fall arrest equipment
- **Fit youth for a respirator** and demonstrate proper use
- Train youth to call an adult if equipment malfunctions

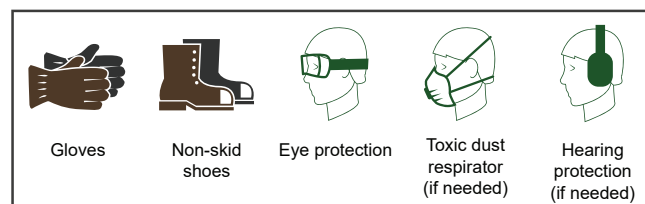
## Supervision

<b>14-15 yrs</b>	Nearly constant supervision progressing to intermittent
<b>16+ yrs</b>	Intermittent supervision progressing to periodic

## Hazards



## Protective Strategies



# BACKGROUND & SIGNIFICANCE

This booklet contains work guidelines that farm parents and supervisors can use to assign age and ability appropriate tasks to youth operating farm equipment. It begins by describing the importance of using these guidelines to safeguard working youth. This is followed by sections showing how to use the guidelines to assign appropriate tasks and important supplemental information. The remainder of the booklet contains work guidelines related to operating large equipment. The complete sets of agricultural youth work guidelines can be found at [cultivatesafety.org/work](http://cultivatesafety.org/work).



Additional booklets available:

- *Safety Guidelines for Youth Working with Animals*
- *Community Based Agriculture: Safety Guidelines for Youth Working in Gardens*

Young children (under age 7) are unlikely to be capable of operating equipment safely. These children should never be in the farm worksite with adults and are safer in child care or a supervised **safe play area**.

More information is available at [cultivatesafety.org/play](http://cultivatesafety.org/play)

## National Children's Center for Rural and Agricultural Health and Safety

**Phone:**  
1-800-662-6900

**Email:**  
[nccrahs@marshfieldresearch.org](mailto:nccrahs@marshfieldresearch.org)

**Website:**  
[www.marshfieldresearch.org/nccrahs](http://www.marshfieldresearch.org/nccrahs)

**Recommended Citation:**  
Salzwedel M, Sauer M, Lee, B, (2020). Safety Guidelines for Youth Operating Farm Equipment. Marshfield Clinic, Marshfield, WI.

## Benefits of Farm Work

Work is inherently good for children and teens, and agriculture offers many opportunities for youth to develop work skills and benefit from farm life. Benefits often associated with growing up on farms and ranches include instilling a good work ethic, teaching responsibility, building character, learning about the life/death cycle, and instilling a passion, love and respect for the land. Research reinforces many of these beliefs, including the strengthening of family bonds and health benefits such as lower incidences of allergies and asthma.

## Hazardous Nature of Work

While there are benefits to working in agriculture, there are also risks. Agriculture remains one of the most dangerous industries in the U.S., and agricultural injuries and fatalities to youth are a significant burden on our public health system. From 2011-2017, 81% of occupational fatalities among youth 15-17 years old were in the Agricultural/Forestry/Fishing and Hunting sector. Since 2009, more youth have died working in agriculture than in all other industries combined, and it is well known that youth who perform work that does not match their developmental level have increased risk of injury. Injuries to children and youth can also occur when adults, youth and children underestimate the hazards and risks involved in a task.

## Reducing Risks

In order to reduce risk of injury, it is important to address the hazards that cause them, especially hazards that pose the highest risk. High-risk hazards are those that frequently cause injuries or result in severe injuries or death. In non-agricultural industries, regulations and work standards indicate appropriate work for both adults and children. These regulations are a key component of reducing injury risks. Standards and regulations in agriculture are different, however, and often do not apply on the family farm. Parents on family farms often assign farm jobs based on their past practices, the need for "extra hands" to get the job done, and preferences of the child and/or parent, rather than assessing a youth's ability to perform a task.

The Agricultural Youth Work Guidelines (AYWG) were developed to help farm parents and other supervisors assign safe and appropriate farm jobs, thus reducing risk of injury to youth working in agriculture. The AYWG are designed to address both the physical risks found in the environment and the behavioral/decisional risks often encountered with young workers. The guidelines assess if a youth is ready to perform a specific task, such as operating a tractor, and to provide adults with information needed to provide adequate supervision, address hazards and employ protective strategies.

## ASSESSING A CHILD/YOUTH'S ABILITIES

When using the work guidelines, the information in the upper left box of the guideline can be used to assess a youth's ability to perform a job safely. When assigning work to youth, in addition to looking at the requirements of the task, it is important to assess a youth's personality, work style and abilities. Children and teens are not simply "miniature adults". Their physical, cognitive and emotional development is different.

Youth may:

- Like to explore, experiment, and take risks
- Have a limited sense of vulnerability to injury
- Behave impulsively
- Try to "prove" themselves
- Think they can do things safely that they can't
- Be susceptible to peer pressure
- Lack work experience
- Be reluctant to ask questions
- Display enthusiasm that outweighs judgement



Many of these behaviors/traits are normal for youth and are not easy to change. It's how children and youth act, and it's different than how adults act. For more information on child/youth characteristics and strategies adults can use to address them, see page 5 or visit [cultivatesafety.org/child-development](http://cultivatesafety.org/child-development).

Once familiar with a youth's abilities, select the agricultural youth work guideline for the task the youth will be performing. Use the content in the box titled "Can youth do this job safely?" to determine if the task is a good match for the youth's abilities. If the youth is able to comply with the items in this box, the task is a good fit.

## ADULT RESPONSIBILITIES

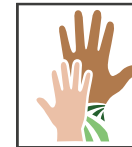
The middle boxes on the guideline provides information on adult responsibilities. Safeguarding working youth involves more than just ensuring they are able to safely perform a task. Adults must also minimize hazards and risks in the worksite and employ protective strategies, such as providing personal protective equipment, training and supervision.

### Supervision

Youth should always be supervised while performing agricultural work. The Agricultural Youth Work Guidelines contain information on levels of supervision for young workers. While the recommended levels of supervision in these guidelines are based on age, this does not mean that youth in these age categories can always safely perform these tasks. An adult should first determine if the task is a good match for the youth's abilities, and then use these age categories to select the level of supervision needed. Levels of supervision include:

- Constant – an adult is always within sight, sound and reach of a youth
- Intermittent – an adult is out of sight and sound for up to 15 minutes
- Periodic – an adult observes the youth at least every 15-30 minutes

Visit [cultivatesafety.org/supervision](http://cultivatesafety.org/supervision) for more information on supervision. Free training for supervisors of young workers is available in English and Spanish at [agsupervisortraining.org](http://agsupervisortraining.org)



## Operating a Lawn Mower (push mower and riding mower)

### Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie back long hair
- Check and clear area of debris in path of mower
- Stay focused on task for up to 50 minutes
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- Mature enough to consistently do what is expected
- Think through actions and consequences before acting
- Good peripheral vision
- Reach and operate controls when standing behind push mower
- Strength to safely maneuver push mower
- Reach and repeatedly operate controls of riding mower without straining when seated and wearing seatbelt
- Use hands and feet simultaneously
- Safely demonstrate the job 4 to 5 times
- Comply with the [working outdoors guideline](http://cultivatesafety.org/working-outdoors)
- Maintain [two-way communication](http://cultivatesafety.org/two-way-communication) link



### Adult Responsibilities

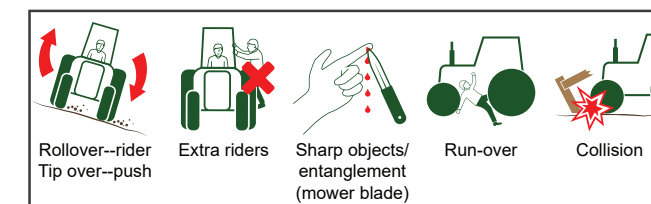
- Ensure mower is mechanically sound with safety features in place
- Verify area is clear of debris before mowing
- Ensure youth do not operate mower after dark or in bad weather
- Train youth to operate riding mower at low speed and on level ground
- Educate youth to mount riding mower using 3 points of contact
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Demonstrate how to safely operate a lawn mower
- Provide appropriate training
- Train youth to call an adult if equipment malfunctions

### Supervision

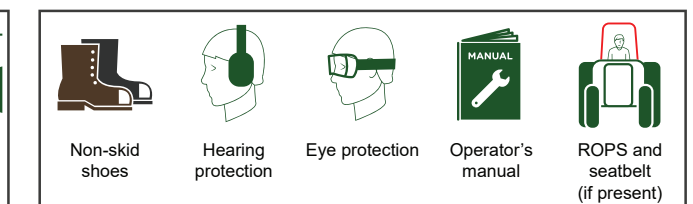
Note: Ensure riding mower is sized appropriately for youth. See [Tractor Operations Chart](http://cultivatesafety.org/tractor-operations) for guidance.

12-13 yrs	Constant supervision progressing to periodic (no riding lawn mowers)
14-15 yrs	Intermittent supervision progressing to periodic
16+ yrs	Periodic supervision

### Hazards



### Protective Strategies







# Operating a Skid Steer

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie back long hair
- Reach and operate controls while wearing a seatbelt
- Good peripheral vision
- Use hands and feet simultaneously
- Understand and consistently repeat a 10-step process
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- Mature enough to consistently do what is expected
- Think through actions and consequences before acting
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication](#) link



## Adult Responsibilities

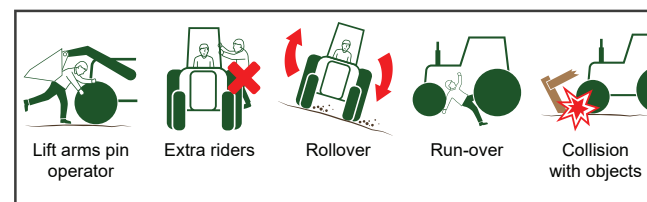
- Comply with [working outdoors guideline](#)
- Ensure skid steer is mechanically sound and safety features are in place
- Demonstrate how to safely operate a skid steer
- Provide appropriate training
- Educate youth to mount skid steer using 3 points of contact
- Ensure youth does not operate skid steer after dark or in bad weather
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Train youth to call an adult if equipment malfunctions

## Supervision

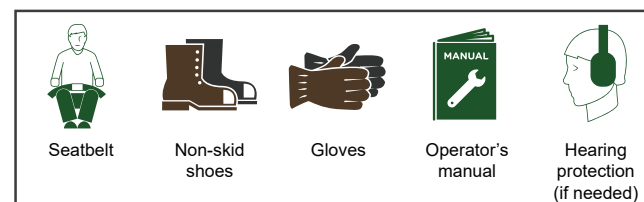
*Note: Youth should not engage in high risk activities, such as loading/unloading skid steer for transport or driving on roads.*

**16+ yrs** Nearly constant supervision progressing to intermittent

## Hazards



## Protective Strategies



## Hazards and Protective Strategies

The bottom boxes in the guideline list common hazards and protective strategies. The AYWG highlight the most common and/or highest risk hazards and related protective strategies associated with the task. However, it is important to understand that these guidelines do not identify all hazards and protective strategies for every circumstance, as the number and types of hazards may vary by farm or worksite. It is also important that adults review worksites prior to youth working in them to address hazards and determine what personal protective equipment is needed. Policies and procedures should be established detailing the personnel, process, and frequency of these worksite reviews.



## Communication

The guidelines indicate that youth need to maintain two-way communication between themselves and an adult, which means a communication plan needs to be in place. Youth must be able to contact an adult while they are working in case they have questions, need help, or encounter an emergency situation. This necessitates that youth have some type of communication tool such as a cell phone (with service) or a two-way radio. Importantly, youth must also be trained to only use communication tools under safe conditions, and not allow it to become a hazardous distraction by diverting their attention from their task. Youth may be distracted from their work by activities like texting while driving a tractor or talking on a two-way radio while operating a skid steer.

All farms should have communication plans that include: a) type(s) of communication tools, b) how to use them, c) when to use these tools, d) when not to use them, and e) names of contact person(s). Youth should be fully trained on this plan, including what to do in the event that they cannot reach their assigned contact, and what to do if there is an emergency. For more information on communication plans, including instructions and templates, visit [cultivatesafety.org/communication-plan](#).

## Training Children & Youth

Most children and youth respond best to hands-on training when learning new jobs. Demonstrate the job and have youth practice the job under close supervision until they are proficient. Document all training so you know which training a worker had and when refresher training is needed.

### What to do:

- Provide a safe workplace
- Identify prohibited equipment/tasks
- Assign supervisors who work well with youth
- Provide personal protective equipment
- Praise positive/safe behaviors
- Model safe behaviors
- Encourage questions
- Set and enforce rules

### What to train:

- Doing the job safely
- Recognizing hazards
- Taking precautions
- Using personal protective equipment
- How to handle problems
- Communication procedures
- Emergency procedures
- Sources for more information

### How to train:

- Explain the task
- Demonstrate the task
- Ask youth to repeat instructions
- Watch youth perform task, praise success and correct mistakes
- Answer all questions
- Keep sessions short
- Supervise closely until proficient

### When to train:

- First time doing task
- With every new task/tool
- With any new hazard
- After an incident
- Periodically for review

### Show sensitivity:

- Learn about youth's culture
- Demonstrate respect
- Be patient
- Avoid value judgements
- Use sensitive language
- Accept lack of direct eye contact
- Use culturally appropriate materials
- Praise more often than criticizing





## HIRED YOUTH

Youth hired to work on farms may be subject to state or federal regulations governing what tasks they can do. Federal regulations contain significant differences between work permitted for hired youth in agriculture and non-agricultural operations.

When determining if youth are subject to federal regulations, supervising adults need to consider several issues. It's important to note that on family farms, parental rights and responsibilities prevail. If a child is employed by his/her parent or by a person standing in place of the parent on a farm owned or operated by that parent/parental substitute, then federal regulations do not apply. One caveat: while federal regulations may not apply in certain situations, parents and supervisors should check for relevant state regulations. Regardless of whether state or federal regulations apply, parents should determine work assignments appropriate for the youth's age and ability. Visit [cultivatesafety.org/hired-youth](https://cultivatesafety.org/hired-youth) for more information about hired youth.



### Federal Regulations

Federal child labor laws were enacted to set minimum standards to help ensure young people participate in work that is safe and does not jeopardize their health, well-being, or education. The information below provides a brief overview of these laws.

#### Fair Labor Standards Act (FLSA)

- Minimum age for most employment outside of school hours is 14 years
- Youth 12 or 13 years old may work during non-school hours with a parent or with consent from a parent/guardian
- Youth under 12 may be employed during non-school hours with parental consent only on a farm where employees are exempt from the Federal minimum wage provisions
- Hazardous duties, known as the Hazardous Orders, are prohibited for youth under 16 years of age
- Minimum wage laws may apply; typically overtime pay is not required
- In addition to family farm (parental) exemptions, there are also limited exemptions for student learners and vocational agriculture training programs
- Migrant and seasonal agricultural workers are subject to the same restrictions and entitled to the same protections as other farm workers
- There are specific recordkeeping requirements for young workers, including name, residence, date of birth and written parental consent (if required)

Note: young entrepreneurs who perform tasks such as cutting their neighbor's lawn or babysitting on a casual basis for farmers are not covered under the FLSA. For more information on federal regulations, visit [dol.gov/agencies/whd/child-labor/agriculture](https://dol.gov/agencies/whd/child-labor/agriculture).

### State Regulations

Some states have additional or more restrictive regulations. State-specific child labor information is available at [dol.gov/agencies/whd/state/child-labor/agriculture](https://dol.gov/agencies/whd/state/child-labor/agriculture).

### Model Policy: Youth Employment in Agriculture

This model policy includes voluntary guidelines for hired youth farmworkers. Employers, employer organizations, youth employment programs, and health and safety organizations are encouraged to adapt all or parts of this policy. Possible adaptations include adding logos and emphasizing certain jobs specific to your organization. Parents may also find these general guidelines to be useful. More information is available at [marshfieldresearch.org/nccrahs/model-policy-youth-employment-in-agriculture](https://marshfieldresearch.org/nccrahs/model-policy-youth-employment-in-agriculture).



## Operating a Utility Task Vehicle (UTV)

### Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie back long hair
- Reach and operate controls while wearing seatbelt
- Reach the ROPS handhold while seated wearing seatbelt
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- **Mature** enough to consistently do what is expected
- **Think through** actions and consequences before acting
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication](#) link



### Adult Responsibilities

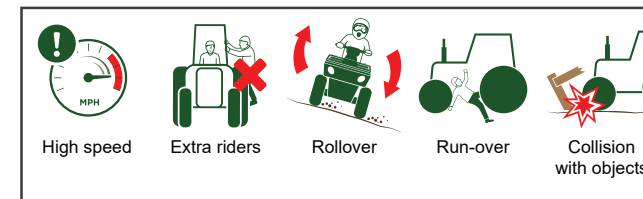
- Ensure UTV is mechanically sound with safety features
- Provide appropriate training
- Ensure youth does not operate UTV after dark or in bad weather
- Teach youth to minimize driving on or crossing public roads
- Demonstrate how to safely drive an UTV
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Establish a safe route to the worksite
- Ensure load is appropriate size, balanced and secured
- Train youth to call an adult if equipment malfunctions

### Supervision

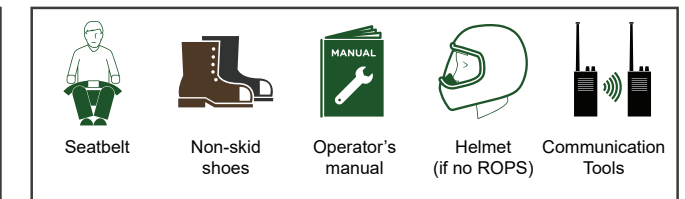
*Note: Youth should not engage in high risk activities, such as loading/unloading UTV for transport, driving on roads or spraying.*

**16+ yrs** Continuous supervision progressing to periodic

### Hazards



### Protective Strategies



[www.cultivatesafety.org](https://www.cultivatesafety.org)

SAFETY GUIDELINES FOR YOUTH OPERATING FARM EQUIPMENT





# Operating an All-Terrain Vehicle (ATV)

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing; clothes with strings; tie back long hair
- Reach and operate controls when seated in center of seat or when shifting body to the back of the seat
- Stand upright while straddling the seat and lean forward over the handlebars
- Strong enough to operate the controls without straining
- Push ATV off if pinned underneath
- Understand and consistently repeat a 10-step process
- Good peripheral vision when wearing a helmet
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- Mature enough to consistently do what is expected
- Think through actions and consequences before acting
- ATV has a Crush Protection Device (CPD) designed to prevent crush injuries in lower speed crashes (<30 mph)
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication](#) link



## Adult Responsibilities

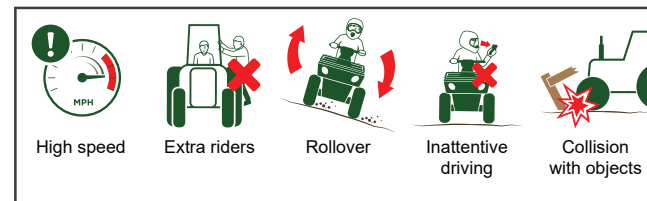
- Comply with [working outdoors guideline](#)
- Ensure ATV is mechanically sound with safety features
- Verify ATV model meets “rider fit” recommendations
- Provide appropriate training
- Ensure youth does not operate ATV after dark or in bad weather
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Establish a safe route to the worksite
- Ensure load is appropriate size, balanced and secured
- Train youth to call an adult if equipment malfunctions

## Supervision

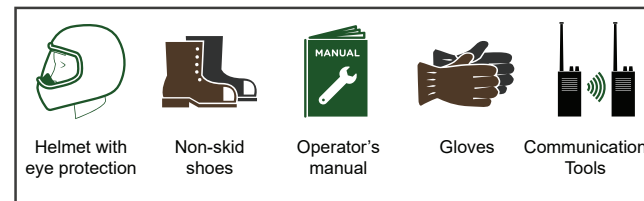
Note: Youth should not engage in high risk activities, such as loading/unloading the ATV for transport, driving on roads and spraying.

**16+ yrs** Continuous supervision progressing to periodic

## Hazards



## Protective Strategies



## CHILD DEVELOPMENT AND WORKING IN AGRICULTURE

Children are not simply “miniature adults”. As youth grow through childhood, adolescence, and young adulthood they gain physical strength and size but also stronger thinking, processing and decision-making skills. These abilities develop at different rates for different children, including within the same family. For example, one 14 year old may be relatively mature and accept responsibility well, while the next may be more of a risk-taker, needing closer adult supervision until they grow older. Similarly, one 7 year old may be physically big and strong but struggle to consistently understand and follow safety rules while another 7 year old may be very good at following rules but lack the physical strength for specific tasks. This variation in development is normal. Combined with the hazardous nature of some agricultural tasks however, it makes it unwise to assign work based only on the age or size of the youth. Instead, adults must consider the requirements of the task and the youth’s abilities and limitations, and then assign work carefully, always ensuring the youth has the skills and ability to complete the task safely. The chart below will help you assign work appropriate for a youth’s age and abilities.

TOPIC	CHARACTERISTICS	SAFETY STRATEGIES FOR ADULTS
<b>Modeling</b>	Youth learn from watching adults and copy what they see.	Model safe behavior. Youth may copy what you do rather than following what you say.
<b>Teaching</b>	Practice and repetition help youth learn new tasks.	Teach first, let youth try the task, then provide positive and constructive feedback. Be patient as youth learn.
<b>Attention Span</b>	Attention improves with age. Most youth don’t develop adult-level attention spans until their early 20s.	Assign short tasks, provide frequent breaks and change tasks often.
<b>Decision Making</b>	Youth get better and faster at decisions as they develop, but even older adolescents may make risky, impulsive decisions.	Don’t put youth in situations where bad decisions can cause injury.
<b>Transferred Learning</b>	Youth may not transfer learning from one task to another.	Don’t assume youth know how to do a new task. Teach them new tasks and ensure competency.
<b>Supervision</b>	Because of youth’s underdeveloped abilities, they need adult supervision to help prevent injuries.	The type/level of supervision needed depends on a youth’s age, ability and the task. Visit supervision and work guidelines for more information.
<b>Rules</b>	Youth benefit from rules that are known, understood and obeyed.	Set and enforce rules consistently. Explain reasons for rules and follow the rules yourself. Youth notice if you violate rules and may copy risky behavior.
<b>Praise</b>	Praise positive and safe behaviors. Behavior that is reinforced will likely be repeated.	Tell youth when they do something safely. Use a proud and congratulatory tone.
<b>Strength &amp; Stamina</b>	Young children have less strength/stamina than older youth. They may try things beyond their ability.	Assign tasks involving smaller loads and shorter distances to younger children, adjusting as they mature. Provide breaks.
<b>Confidence</b>	Youth may feel overconfident - even invincible - leading to risk-taking.	Set and enforce rules. Monitor and supervise.
<b>Self-identity</b>	Many youth value how they look and how others view them. They may want to impress peers. This can lead to hairstyles and outfits that create risk.	Encourage independence and self-identity, but monitor hairstyles and clothing. Enforce safety rules and ensure personal protection is not skipped in favor of appearance.
<b>Judgment &amp; Risk-Taking</b>	Children may misjudge risk. They may think they can do more than they can.	Safeguard the environment and provide supervision. Assume children might over-estimate their abilities and take risks.
<b>Safeguards</b>	Youth may skirt safeguards like equipment guards and shields and avoid wearing gloves, goggles, boots, and other personal protective equipment.	Use safety equipment yourself. Don’t modify safety devices or remove guards or shields. Wear protective equipment. Supervise and prevent youth from taking shortcuts.

Developed by David Schwebel, PhD, Child Development Specialist, University of Alabama at Birmingham  
<https://doi.org/10.21636/nfmc.nccrahs.youthwork.childdevwork.g.2017>



## ADDITIONAL CONSIDERATIONS



### Emergency Preparedness:

Even if a farm has a comprehensive safety strategy, there is always the possibility of a serious injury or emergency. This makes emergency planning important, as well as ensuring workers are available and trained to respond appropriately until emergency service personnel arrive. Written emergency plans, policies and procedures should be developed, and all workers should know their roles in the event of an emergency.



### Handwashing and Restrooms:

Proper hand washing and adequate restroom facilities are important hygienic considerations. Proper hand washing will eliminate dust and dirt as well as contaminants, allergens, and soil pathogens that could lead to illness.



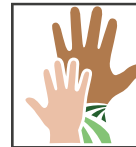
### Signs:

Signs are an important method of communicating information to workers. Signs can be posted to detail proper procedures (e.g., handwashing sign), to designate areas where children/visitors are not allowed (e.g., Keep Out sign), to educate about hazards (e.g., Electrical Hazard sign), or to indicate that personal protective equipment is required (e.g., Eye Protection Required sign).



### Equipment & Building Maintenance:

All equipment and buildings need regular maintenance, and an adult should check them before each use. Ensure equipment runs well and has all guards and safety features in place. Buildings should be adequately ventilated, clean, and well maintained.



## Horses and Trailed Implements (hitch/unhitch and fieldwork)

### Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie back long hair
- Comply with the [fieldwork with an implement](#), [working with large animals](#) and [working outdoors](#) guidelines
- Good [peripheral vision](#)
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- Attention span [long enough](#) to complete work
- [Mature](#) enough to consistently do what is expected
- [Think through](#) actions and consequences before acting
- Lift object, using [proper lifting technique](#)
- Strength to control horse and equipment without overreaching
- Ensure there are no extra riders or passengers
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication](#) link
- Change outer clothing and wash hands after job



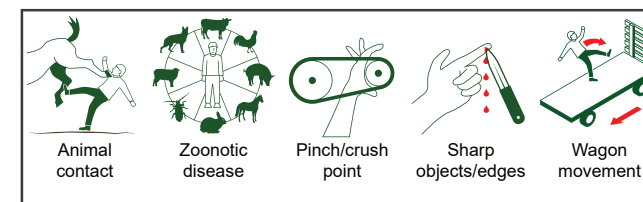
### Adult Responsibilities

- Ensure youth does not perform task after dark/in bad weather
- Ensure second person is available to hold animal while hitching
- Ensure equipment is [mechanically sound](#) and [safety features](#) are in place
- Ensure seat is padded and properly supported
- Ensure work area is as free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Ensure animals are free of disease/injury and properly trained
- [Fit youth for respirator](#) if needed and demonstrate proper use
- Provide appropriate training
- Demonstrate how to safely work with large animals

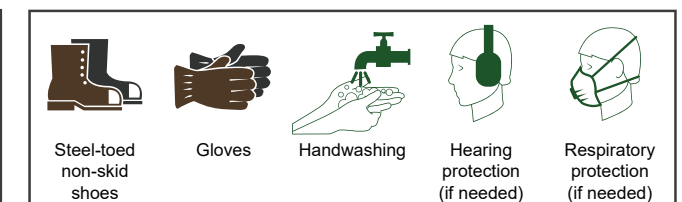
### Supervision

14-15 yrs	Constant supervision progressing to intermittent
16+ yrs	Intermittent supervision

### Hazards



### Protective Strategies





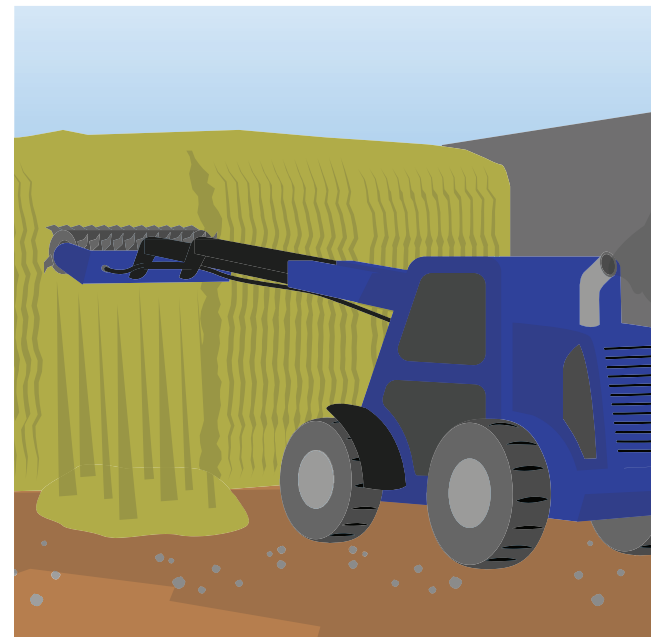


## Facing Silage from a Bunker

### Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie up long hair
- Read, understand, and follow the operator's manual
- Safely [operate a tractor](#) and [use a front end loader](#)
- Check for/avoid people and obstacles in the worksite
- Have a second person (observer) present and know where they are at all times
- **Good hand-eye coordination**
- Understand and consistently repeat a 10-step process
- Stay focused on a task up to 50 minutes
- **Mature** enough to consistently do what is expected
- **Think through** actions and consequences before acting
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- Safely demonstrate the job 4 to 5 times
- Call an adult if equipment malfunctions
- Maintain [two-way communication](#) link



### Adult Responsibilities

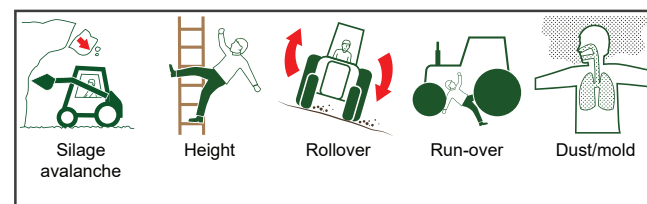
- Comply with [working outdoors guideline](#)
- Ensure equipment is mechanically sound and **safety features** are in place
- Ensure trained observer is present, who never stands closer than 3 times height of pile
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- [Fit youth for respirator](#) and demonstrate proper use
- Demonstrate how to safely face silage
- Provide appropriate training
- Train youth to call an adult if equipment malfunctions

### Supervision

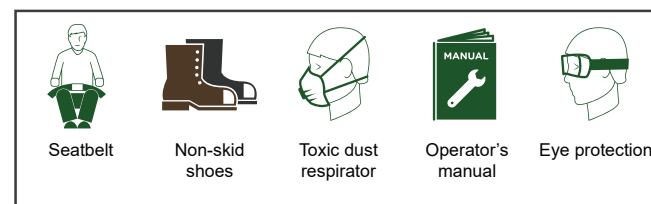
*Note: Ensure tractor is sized appropriately for youth. Youth must be 16+ years to operate a front end loader on a tractor over 20hp. See [Tractor Operations Chart](#) for guidance.*

14-15 yrs	Nearly constant supervision progressing to intermittent
16+ yrs	Intermittent supervision progressing to periodic

### Hazards



### Protective Strategies



## MORE RESOURCES

**Cultivate Safety** ([cultivatesafety.org](#)) - Designed for farmers, parents and supervisors, this website provides information on agricultural safety and health, including

- **Agricultural Youth Work Guidelines**
- **Information and Guidelines for Creating Safe Play Areas**
- **Online Tools for Agricultural Health and Safety**
- **Childhood Agricultural Safety Network (CASN)**

**Cultivate Safety Resource Library** ([cultivatesafety.org/resources](#)) – Search this library for access to hundreds of free agricultural safety and health resources, including signs, guidelines, policies and more. Examples of popular resources include:

- **Employee Safety Orientation Checklist**
- **Child/Youth Agricultural Safety Brochure**
- **Child/Youth Safety Checklist**
- **Adult Agricultural Health and Safety Materials**

**U.S. Department of Labor: Youth Rules** ([youthrules.dol.gov](#)) – Provides access to information on federal and state child labor laws, teen work stories, news and other resources.

**National Institute for Occupational Safety & Health** ([cdc.gov/niosh/topics/youth](#)) – Includes injury and fatality information and statistics for young workers, as well as access to health and safety resources, project information and related topics.

**Safety in Youth for Agriculture** ([ag-safety.extension.org/safety-in-agriculture-for-youth](#))

- **SAY Clearinghouse** – consists of two different types of educational products: formal curricula and other supporting resources and provides their alignment to Agriculture, Food, and Natural Resources (AFNR) Career Cluster Content Standards related to agricultural safety and health.
- **SAY Belief Statements** – the belief statements and guiding principles were developed to encourage parents, employers, agricultural organizations, educators, safety and health professionals, healthcare professionals, representatives of underserved populations, and other interested stakeholders to promote safety and health for youth working in agriculture.

**National Safe Tractor and Machinery Operation Program** ([extension.psu.edu/national-safe-tractor-and-machinery-operation-program-manual](#)) – this safety training is for youth ages 14 and 15 to become certified to legally operate a tractor or other specific machinery. Now in its third edition, the student manual provides in-depth information on what youth can expect when working on a farm, safety basics, agricultural hazards, how to operate a tractor, and how to handle materials, among other important topics.

## YOUTH WORK GUIDELINES

The following pages contain the agricultural youth work guidelines related to operating farm equipment. Some of the guidelines contain green text which have tool tips that appear when you hover over the text when viewed in digital format (either online or as a PDF). In addition, when viewing these guidelines on the Cultivate Safety website ([cultivatesafety.org/work](#)), the guidelines are available in multiple formats, including interactive, read, and print/view. When accessing guidelines in the “print/view” format online, you can select from various skin tones and equipment colors to customize the guideline before you view, print or download the guideline. The guidelines are also available online in French and Spanish.





# Working Outdoors

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie back long hair
- Wear weather appropriate clothing
  - Hot weather: lightweight, light colored
  - Cold weather: layers of warm clothes and outerwear, hat, gloves and boots
  - Sun-safe hat (minimum 4" brim)
- Know the signs of [heat](#) and [cold](#) related illnesses
- Drink enough fluids to stay [hydrated](#)
- Stay aware of changing weather conditions
- Know what to do in the event of an emergency
- Maintain [two-way communication](#) link



## Adult Responsibilities

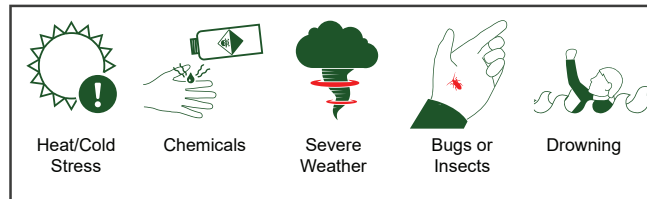
- Provide 10 minute break every hour (more frequently for younger children)
- Provide appropriate training
- Check heat/cold index to verify safe temperatures for working outdoors
- Ensure re-entry standards for pesticides, herbicides, fungicides and fertilizers are followed
- Verify youth is free from insect allergies or has remedies for allergies
- Ensure bathroom/handwashing facilities are available
- Have drinking water available

## Supervision

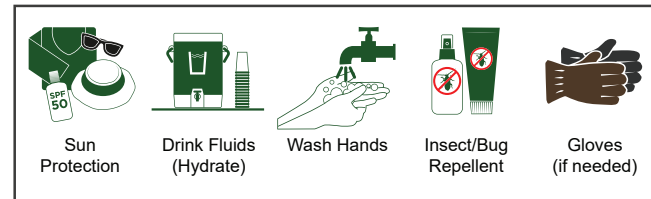
- Supervise constantly until youth demonstrates mastery of task
- Check on youth; frequency\* depends on:
  - Age of youth
  - Type of job
  - Worksite hazards
- Immediately correct unsafe behaviors
- Ask for questions

*\*See work guideline for specific job for guidance and more information*

## Hazards



## Protective Strategies

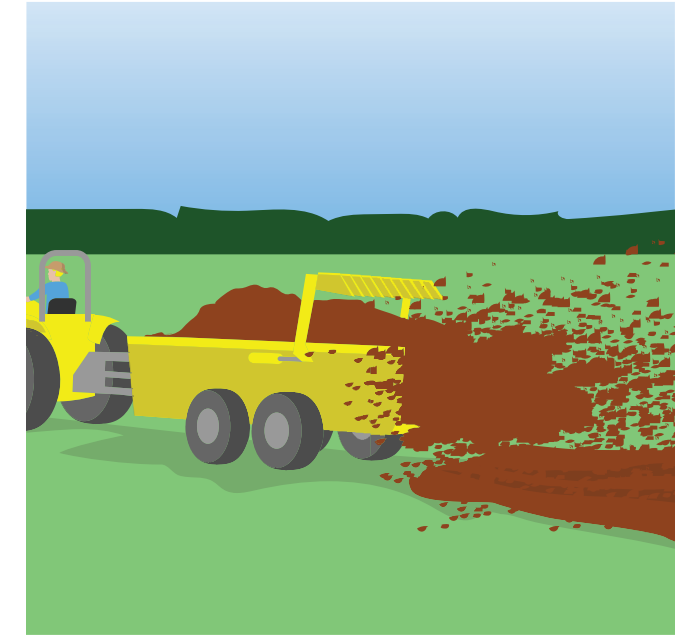


# Spreading Solid Manure

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie up long hair
- Wear long pants and a long sleeve shirt made of breathable material
- Read, understand, and follow the operator's manual
- Safely [drive a tractor](#), [connect/disconnect an implement](#), and perform [fieldwork with an implement](#)
- Good [peripheral vision](#)
- Stay focused on a task up to 50 minutes
- Check for/avoid people and obstacles in the worksite
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- Can understand and consistently repeat a 10-step process
- [Mature](#) enough to consistently do what is expected
- [Think through](#) actions and consequences before acting
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication](#) link
- Change clothes and wash hands after completing job



## Adult Responsibilities

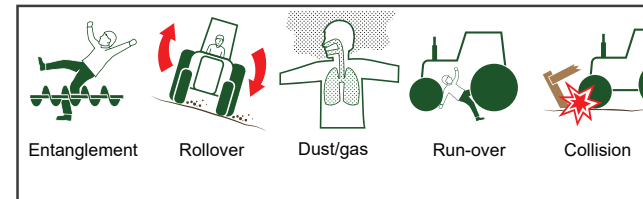
- Comply with the [working outdoors guideline](#)
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Ensure equipment is [mechanically sound](#) with all safety features in place
- Educate youth to check work area for people or obstacles before operating equipment
- Provide appropriate training
- [Fit youth for a respirator](#) and demonstrate proper use
- Demonstrate how to safely spread solid manure
- Educate youth to call adult in event of equipment malfunction

## Supervision

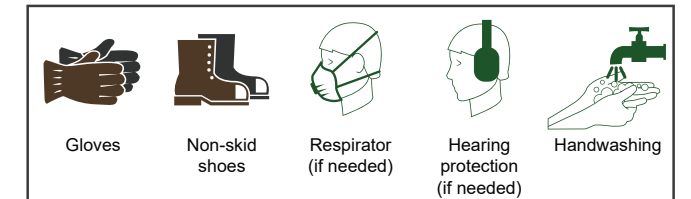
*Note: Ensure tractor is sized appropriately for youth. Youth must be 16+ years to drive an articulated tractor. See [Tractor Operations Chart](#) for guidance.*

14-15 yrs	Nearly constant supervision progressing to intermittent
16+ yrs	Intermittent supervision progressing to periodic

## Hazards



## Protective Strategies





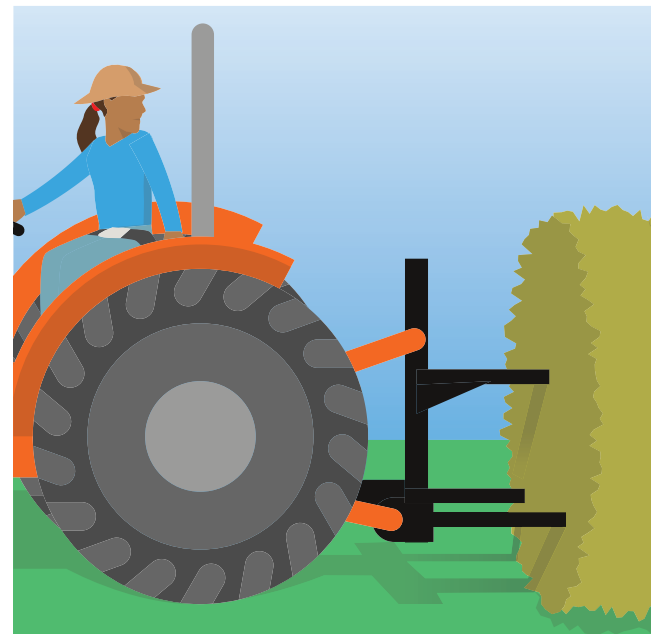


# Moving Large Round Bales (with a 3-point hitch)

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie up long hair
- Read, understand, and follow the operator's manual
- Safely [drive a tractor](#)
- Operate the tractor during daylight, under dry conditions and on level ground
- Safely [connect/disconnect an implement](#), PTO and hydraulics
- Good [peripheral vision](#)
- Stay focused on a task up to 50 minutes
- Check for/avoid people and obstacles in the worksite
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- [Mature](#) enough to consistently do what is expected
- [Think through](#) actions and consequences before acting
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication link](#)



## Adult Responsibilities

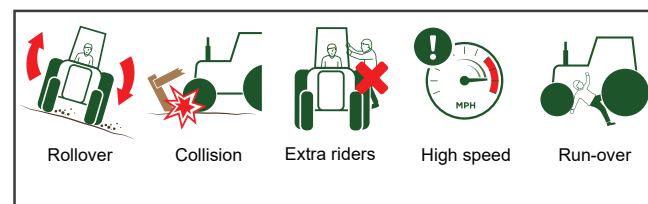
- Comply with the [working outdoors guideline](#)
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Ensure equipment is mechanically sound with all [safety features](#) in place
- Provide appropriate training
- Demonstrate how to safely move large round bales with a 3-point hitch
- [Fit youth for a respirator](#) and demonstrate proper use
- Educate youth to call adult in event of equipment malfunction

## Supervision

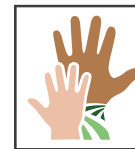
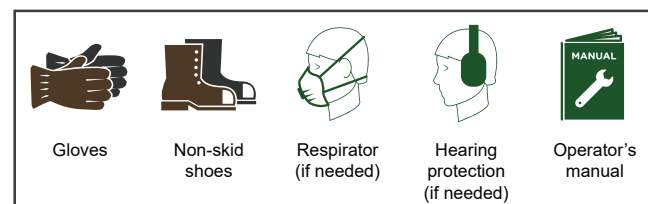
*Note: Ensure tractor is sized appropriately for youth. Youth must be 16+ years to drive an articulated tractor. See [Tractor Operations Chart](#) for guidance.*

14-15 yrs	Nearly constant supervision progressing to intermittent
16+ yrs	Intermittent supervision progressing to periodic

## Hazards



## Protective Strategies



# Bending, Lifting and Climbing

Visit <https://cultivatesafety.org/bending-lifting-and-climbing/> for videos

## Bending



- Avoid loose clothing, clothes with strings, tie up long hair
- Perform warm-up exercises
- Bend safely, using these steps:
  1. Maintain good back posture; raise and lower body with legs
  2. Stand with feet shoulder-width apart, one foot slightly in front of the other
  3. Keep back straight, hold in stomach muscles
  4. Move down to a squatting position using your leg muscles
  5. Shift from leg to leg when squatting, keeping body balanced
  6. Keep your body straight; turn feet and arms, not back, to reach for objects
  7. Do not stay in any one position for more than a few minutes
  8. If lifting is included in task, use proper lifting techniques

## Lifting



- Avoid loose clothing, clothes with strings, tie up long hair
- Perform warm-up exercises
- Determine object weighs less than 25% of body weight; can carry it without straining
- Access object without obstruction
- Lift objects safely, using these steps:
  1. Stand close to the object
  2. Spread feet wide to straddle the object
  3. Squat, bending knees and hips
  4. Keep head up and your back straight
  5. Hold in stomach muscles
  6. Lift using leg muscles, slowly and steadily
  7. Keep the load close to body
  8. Turn feet, not back, in the direction you are going

## Climbing



- Avoid loose clothing, clothes with strings, tie up long hair
- Perform warm-up exercises
- Climb safely, using these steps:
  1. Check that ladder is safely set
  2. Grasp alternate rungs and take first step
  3. Pause and think about whether or not the ladder feels stable
  4. Climb up, keeping feet and hips within sides of ladder frame
  5. Always maintain three contact points, for example, two hands and one foot
  6. Keep head up and back straight
  7. Concentrate on the climbing process
  8. Do not climb beyond the third rung from the top







# Refueling Equipment

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie up long hair
- Read, understand, and follow the operator's manual
- Allow engine to cool and turn off cell phone before refueling
- No smoking or open flames in worksite
- Safely [drive a tractor](#), [self-propelled equipment](#), [ATV](#), [UTV](#) or other equipment
- Mount and dismount equipment facing the machine and using 3 points of contact
- Physically large enough to reach fuel nozzle and controls
- Check for/avoid people and obstacles in the worksite
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- **Mature** enough to consistently do what is expected
- **Think through** actions and consequences before acting
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication link](#)



## Adult Responsibilities

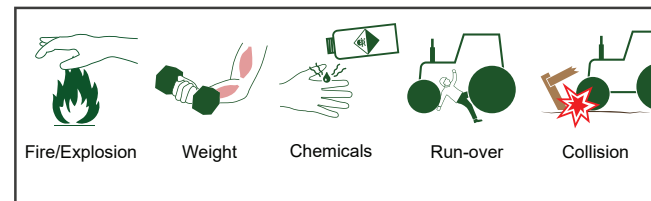
- Comply with the [working outdoors guideline](#)
- Provide approved safety fuel containers of appropriate color for fuel type and label with contents
- Assign second person to assist if climbing on equipment
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Ensure equipment is mechanically sound with all **safety features** in place
- Demonstrate how to safely refuel tanks
- Provide appropriate training, including [proper lifting techniques](#)
- Train youth to call adult in event of equipment malfunction

## Supervision

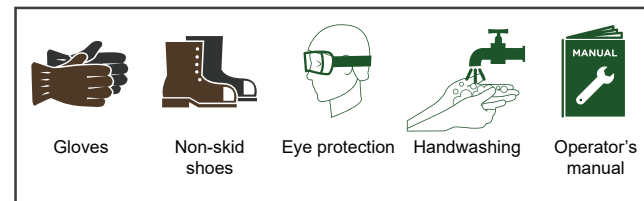
*Note: Ensure tractor is sized appropriately for youth. Youth must be 16+ years to drive an articulated tractor. See [Tractor Operations Chart](#) for guidance.*

14-15 yrs	Nearly constant supervision progressing to intermittent
16+ yrs	Intermittent supervision progressing to periodic

## Hazards



## Protective Strategies

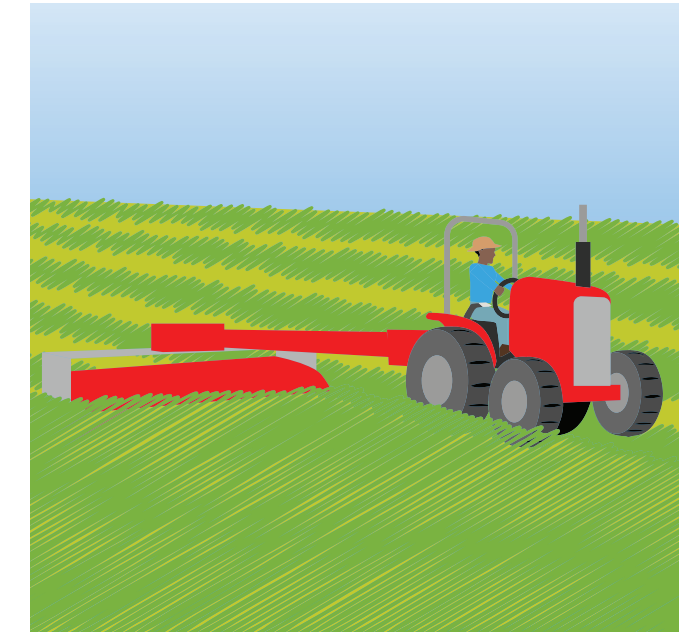


# Haying Operations

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie up long hair
- Read, understand, and follow the operator's manual
- Safely [drive a tractor](#), [connect and disconnect an implement](#), and perform [fieldwork with an implement](#)
- Operate the tractor during daylight, under dry conditions and on level ground
- Good **peripheral vision**
- Stay focused on a task up to 50 minutes
- Check for/avoid people and obstacles in the worksite
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- **Mature** enough to consistently do what is expected
- **Think through** actions and consequences before acting
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication link](#)



## Adult Responsibilities

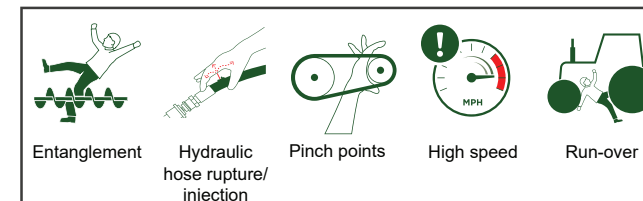
- Comply with the [working outdoors guideline](#)
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Ensure equipment is **mechanically sound** with all **safety features** in place
- Provide appropriate training
- Demonstrate how to safely conduct fieldwork with implement
- [Fit youth for a respirator](#) and demonstrate proper use
- If baling small square bales, ensure workers comply with [loading/unloading hay](#) guideline
- Educate youth to call adult in event of equipment malfunction

## Supervision

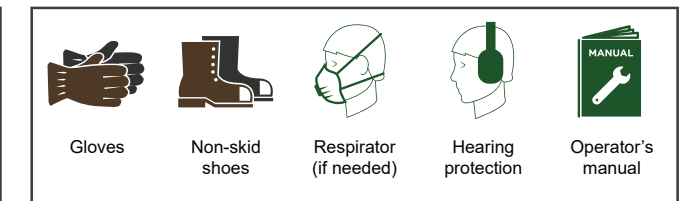
*Note: Ensure tractor is sized appropriately for youth. Youth must be 16+ years to drive an articulated tractor. See [Tractor Operations Chart](#) for guidance.*

14-15 yrs	Nearly constant supervision progressing to intermittent
16+ yrs	Intermittent supervision progressing to periodic

## Hazards



## Protective Strategies



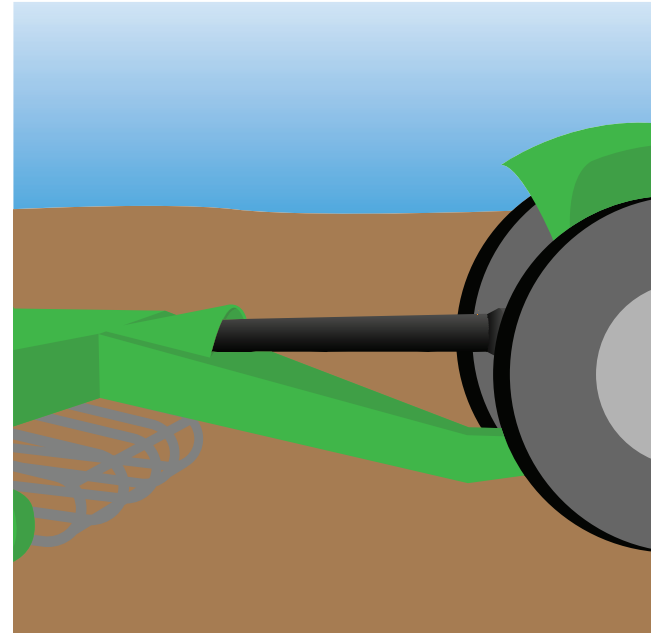


## Fieldwork with an Implement (trailed, 3-point, power take-off (PTO), hydraulics)

### Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie up long hair
- Safely **drive a tractor**
- **Hitch/unhitch** the implement
- **Connect/disconnect** the PTO, 3-point hitch, or hydraulics
- Good **peripheral vision**
- Understand the importance of avoiding contact with implement components (e.g. PTO)
- Stay focused on a task up to 50 minutes
- Recognize a hazard, problem solve, and respond appropriately
- **Mature** enough to consistently do what is expected
- **Think through** actions and consequences before acting
- Safely demonstrate the job 4 to 5 times
- Maintain **two-way communication** link



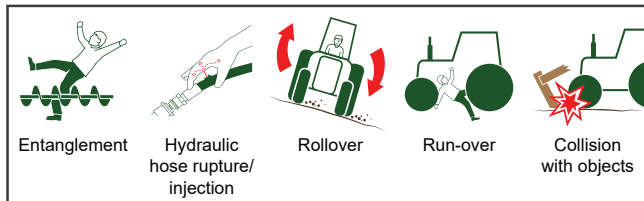
### Adult Responsibilities

- Comply with [working outdoors guideline](#)
- Ensure implement is **mechanically sound and safety features** are in place
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Provide appropriate training
- Demonstrate how to safely do fieldwork with an implement
- [Fit youth for a respirator](#) and demonstrate proper use if needed
- Provide at least one ten-minute break every hour
- Ensure no extra riders on tractor or implement
- Train youth to call adult in case of equipment malfunction

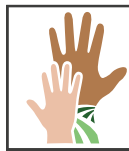
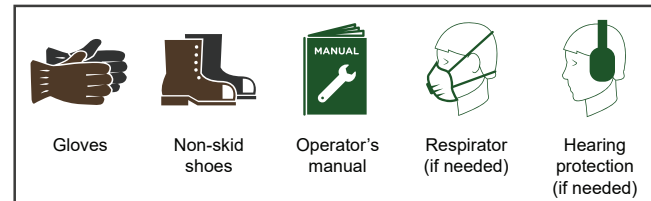
### Supervision

14-15 yrs	Intermittent supervision
16+ yrs	Intermittent supervision progressing to periodic

### Hazards



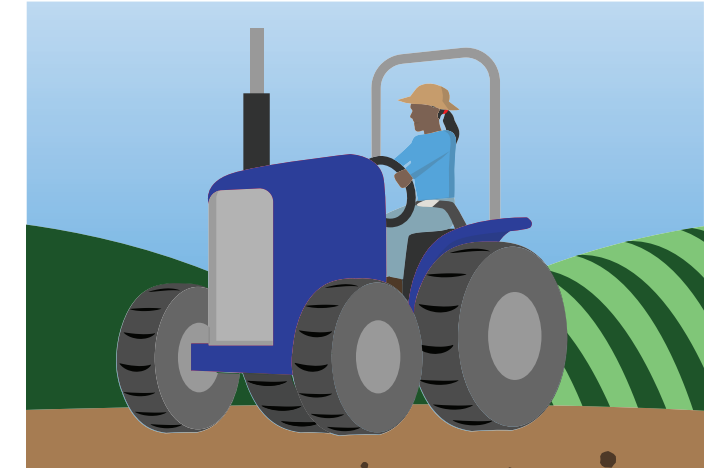
### Protective Strategies



## Cognitive Development & Tractors

### Cognitive Development in Children

- Children's cognitive thinking skills are not as developed as adults.
- The ability to process information the way an adult does involves both maturation and learning. It usually develops slowly over time.
- Maturation in thinking skills does not depend entirely on chronological age, nor is it entirely a function of intelligence.
- The ability to process information and make decisions quickly and precisely is essential to the safe operation of a tractor.



### Differences in Cognitive Ability between Children and Adults

#### Speed of Processing

- Children absorb and process information more slowly than adults.
- Children cannot make decisions as fast or efficiently as adults.
- Tractor operation requires rapid and precise processing of information to remain safe. Any delays – even split seconds – can jeopardize safety.

#### Decision-Making

- Children are still developing the advanced skills needed to think about information logically and reach decisions.
- Children are less able to understand the consequences of their actions.
- Children are not as good at considering alternative options to a dilemma or decision.

#### Impulse Control

- Compared to adults, children have inferior ability to restrain themselves when they want something.
- Poor impulse control increases risk when operating tractors.

#### Generalization Skills

- Children are less able to translate a message learned in one scenario to a similar situation.
- As a result, youth may make dangerous mistakes when operating tractors.

#### Attention Span

- Children are unable to concentrate on a single task for as long as most adults.
- Operating a tractor can require focused attention for long periods of time to maintain safety.

See [Operating a Tractor](#) to determine if a youth is capable of safely operating a tractor.







# Perceptual Development & Tractors

## Perceptual Development in Children

- Children's perceptual processes are not as developed as adults.
- The ability to perceive things the way an adult does involves both maturation and learning; it usually develops slowly over time.
- Maturation in perception does not depend entirely on chronological age, nor is it entirely a function of intelligence.
- The ability to perceive things correctly is essential to the safe operation of a tractor.



## Differences in Perceptual Ability between Children and Adults

### Physical Ability

- Children are less accurate in estimating their ability to reach items like foot and hand controls on tractors.
- If children cannot easily and quickly reach tractor controls, they may collide with objects or run over people in their path.

### Visual Cues

- Children are less skilled at scanning the environment to look for unusual, different or important features.
- The failure to notice obstacles, people or risky situations can result in collisions, run-overs and rollovers.

### Sound Cues

- Children are not as good as adults at using hearing to decide when an approaching vehicle may arrive.
- The misinterpretation of the arrival of an approaching vehicle can result in a collision.

### Distances

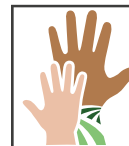
- Children are less accurate judging the distance from themselves to objects in their environment.
- Rollovers can result if a child misjudges the distance between the tire of the tractor and a ditch.

### Movement & Speeds

- Children are less accurate judging the speeds of moving objects, as well as judging acceleration or deceleration of moving objects.
- As a result, youth may encounter other moving vehicles or objects sooner than expected, resulting in a collision.

### Slopes & Terrains

- Children may struggle to accurately judge the angle of inclines and declines.
- Operating a tractor on steep inclines can cause rollovers.



# Connect/Disconnect an Implement (trailed, 3-point, power take off (PTO), hydraulics)

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie up long hair
- Recognize a problem, problem solve and respond appropriately
- React quickly to hazards
- **Mature** enough to consistently do what is expected
- **Think through** actions and consequences before acting
- Good **peripheral vision**
- Lift objects safely, using **proper lifting technique**
- Understand and consistently repeat a 10-step process
- Safely demonstrate the job 4 to 5 times
- Maintain **two-way communication** link



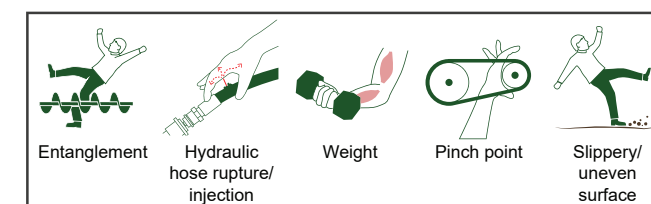
## Adult Responsibilities

- Comply with **working outdoors guideline**
- Ensure objects lifted are less than 25% of youth's body weight
- Ensure implement is **mechanically sound** and **safety features** are in place
- Demonstrate how to safely connect/disconnect PTO, hydraulics and 3-point hitch, as applicable
- Demonstrate proper lifting techniques
- Provide appropriate training
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Train youth to call adult in case of equipment malfunction

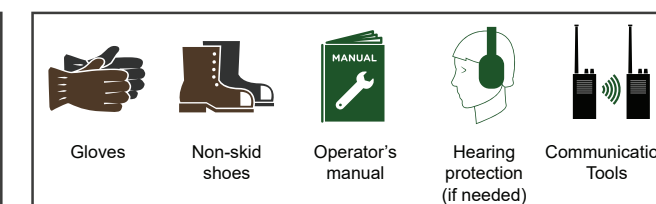
## Supervision

14-15 yrs	Intermittent supervision progressing to periodic
16+ yrs	Periodic supervision

## Hazards



## Protective Strategies





## Using a Front End Loader

### Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie up long hair
- Able to safely [operate a tractor](#)
- Good peripheral vision
- Use hands and feet [simultaneously](#)
- Reach and operate controls while wearing a seatbelt
- Understand and consistently repeat a 10-step process
- Understand the importance of checking for people/obstacles in the area
- [Mature](#) enough to consistently do what is expected
- [Think through](#) actions and consequences before acting
- React quickly to hazards
- Recognize a hazard, problem solve, and respond appropriately
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication](#) link



### Adult Responsibilities

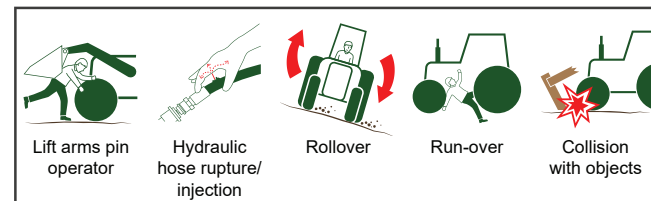
- Comply with [working outdoors guideline](#)
- Ensure front end loader is [mechanically sound](#) and safety features are in place
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Ensure youth does not operate equipment after dark/in bad weather
- Demonstrate how to safely operate a front end loader
- Provide appropriate training
- Train youth to call an adult if equipment malfunctions

### Supervision

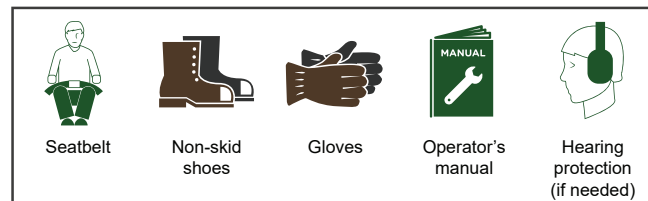
*Note: Ensure tractor is sized appropriately for youth. Youth must be 16+ years to operate a front end loader on a tractor over 20hp. See [Tractor Operations Chart](#) for guidance.*

14-15 yrs	Constant supervision progressing to intermittent
16+ yrs	Intermittent supervision

### Hazards



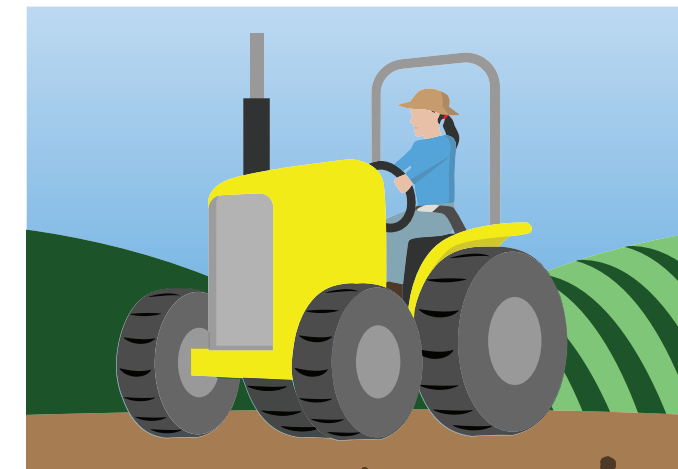
### Protective Strategies



## Physical Development & Tractors

### Physical Development in Children

- Children and adolescents are physically different from adults.
- Youth usually have shorter arms and legs, meaning their reach is less.
- Youth usually have less strength than adults.
- Because of their size, youth may have different visual angles and perspectives than adults.
- Youth may have less coordination and poorer balance than adults.



### Differences in Physical Characteristics between Children and Adults

#### Reach

- Children have shorter arms and legs than adults.
- Children have shorter torsos than adults.
- Because of their size, children may not comfortably, quickly, or easily reach foot pedals, hand levers, or steering wheels while operating a tractor. This can impact safety.
- Because of their size, children may not wear seat belts in tractors, reducing their safety.

#### Strength

- Children are generally weaker than adults.
- Children may tire easily, having less endurance than adults.
- Less strength and less endurance can impact safety because youth may not be able to use strength to push pedals or levers. This is especially risky in emergency situations.

#### Balance and Coordination

- Children are often not as coordinated as adults.
- Children have less ability to balance compared to adults.

#### Vision

- When sitting in a tractor, children may have different visual angles because they are shorter.
- A limited field of view while operating a tractor can impact safety significantly.

See [Operating a Tractor](#) to determine if a youth is capable of safely operating a tractor.







# Social Development & Tractors

## Social Development in Children

- Children's behavior is influenced by others in their lives.
- Adults, and especially parents, can impact children through actual teaching, by modeling safe or unsafe behaviors, and by setting rules that youth are expected to follow.
- Peers can influence children by encouraging or discouraging risk-taking, by creating peer pressure, and by modeling safe or unsafe behaviors.



## How Social Development Can Influence Children

### Parent Teaching

- Parents can teach children how to be safe.
- Guidelines and lessons should be patiently provided.
- Careful and patient rule-setting, teaching, and supervision can increase youth safety while operating tractors.

### Parent Modeling

- Children watch their parents and mimic what they see, both good and bad.
- If parents engage in safe behaviors, their children are likely to absorb those lessons and also engage in safe behaviors. If parents take dangerous risks, children may too.

### Parent Rules

- Parents are the authorities on farms. They must set rules for children and adolescents, and they must enforce those rules.
- Safe behaviors should be praised and rewarded to encourage positive behaviors.

### Peer Risk Taking

- Children and adolescents often take risks, as it is natural to try new things to grow.
- Risk-taking while operating a tractor can be dangerous.

### Peer Pressure

- Children and adolescents are developing their identity – trying to understand themselves. Because of this, they are susceptible to influence from peers.
- Youth may copy what their peers do, and may try to impress their peers. This can lead to risky behavior, including while operating tractors.

### Peer Modeling

- Youth may copy their peers' risky or dangerous behaviors, especially if it is someone they respect or look up to.

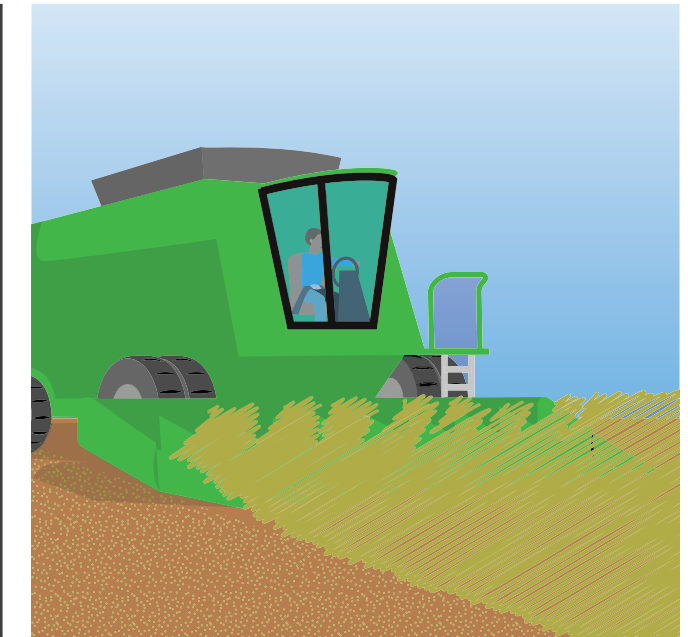


# Operating Self-propelled Equipment

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Avoid loose clothing, clothes with strings, tie back long hair
- **Good peripheral vision**
- Reach and operate controls while wearing a seatbelt
- Use hands and feet **simultaneously**
- Repeatedly operate controls without using both feet
- Maintain a slow/safe speed
- Check for and avoid people and obstacles in the area
- No extra riders
- **Mature** enough to consistently do what is expected
- **Think through** actions and consequences before acting
- **Attention span long enough** to complete work
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- Stay as many feet from edge of drop off as it is deep
- Safely demonstrate the job 4 to 5 times
- Maintain **two-way communication** link



## Adult Responsibilities

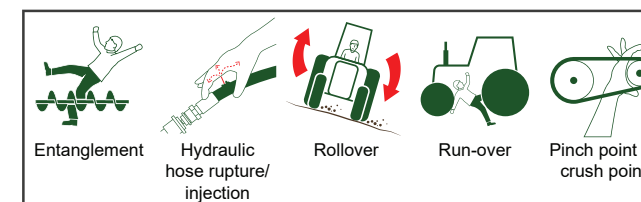
- Comply with [working outdoors guideline](#)
- Ensure equipment is mechanically sound and safety features are in place
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Ensure youth does not operate equipment after dark/in bad weather
- Demonstrate how to safely operate self-propelled equipment
- Provide appropriate training
- Train youth to call an adult if equipment malfunctions

## Supervision

16+ yrs

Constant supervision progressing to intermittent

## Hazards



## Protective Strategies





## Operating Rototillers and Walk-Behind Tractors

### Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job:

- Avoid loose clothing, clothes with strings, tie up long hair
- Strong enough to **safely operate equipment** for duration of task
- Youth is **physically large enough** to safely operate the unit
- Attention span **long enough** to complete work
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- **Mature** enough to consistently do what is expected
- **Good peripheral vision**
- Bend and lift safely, using **proper techniques**
- Limit weight carried to less than 25% of youth's body weight
- Can understand and consistently repeat a 10-step process
- Clears area of all debris and rocks before starting, see [Picking Rock](#) guideline
- [Connect/disconnect an implement](#)
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication](#) link
- Change clothes and wash hands when job is done



### Adult Responsibilities

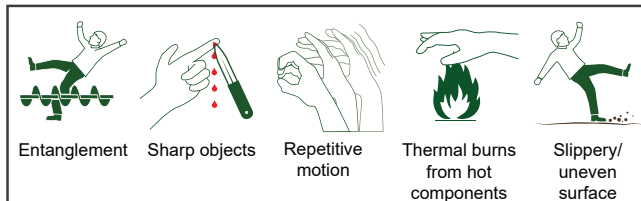
- Comply with the [working outdoors guideline](#)
- Ensure no underground utility lines if digging into soil
- Ensure equipment is mechanically sound with all **safety features** in place
- Provide safe transport to worksite
- Ensure appropriate training
- Demonstrate how to safely operate equipment
- Monitor youth for fatigue while operating equipment
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Train youth to call an adult if equipment malfunctions

### Supervision

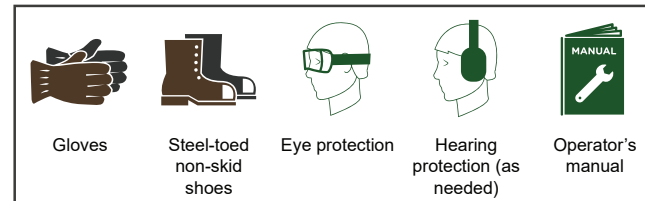
*Note: Youth should begin with smaller rototillers (e.g. Mantis) and progress to larger rototillers and walk-behind tractors as age/abilities allow)*

12-13	Constant supervision progressing to intermittent
14-15	Intermittent supervision
16+	Intermittent supervision progressing to periodic

### Hazards



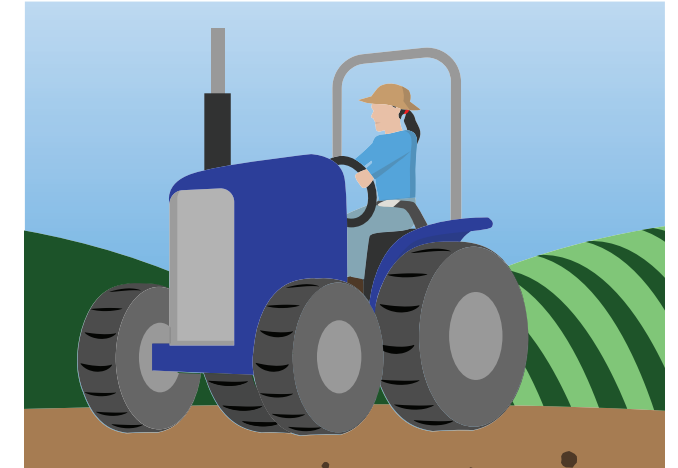
### Protective Strategies



## Sociocultural Factors & Tractors

### Sociocultural Influences for Youth

- Children's behavior is influenced by a range of sociocultural influences that may impact their safety while operating tractors.
- Children use technology frequently, and devices such as smartphones can distract them while operating tractors.
- Children need more sleep than adults, and adolescents have a circadian rhythm that makes it difficult to awaken early. Fatigue can influence safety.
- Children may prefer attire and hair styles that create risk while operating tractors.



### How Sociocultural Factors Can Influence Youth Safety on Tractors

#### Tendency Towards Distraction

- Children frequently use smartphones and other electronic devices to communicate, play games, and listen to music.
- Technology can distract youth when they need to focus on a different task, such as operating a tractor.

#### Fatigue and Sleep

- Youth in North America rarely get the sleep their bodies need.
- Adolescents often have a biologically-driven circadian rhythm that leads them to stay up late and sleep late.
- Fatigue, both chronic and acute, can lead to inattention, risk-taking, poor concentration, and simple mistakes.
- Fatigue is a significant risk for tractor operation safety.

#### Clothing and Hairstyles

- Children and adolescents prefer to look fashionable, sometimes to the point that they ignore safety.
- Wearing loose or tattered clothing can create risk when operating a tractor.
- Loose drawstrings or hair that is not pulled up can create risk when operating a tractor.
- Dangerous choices in fashion and hairstyles can be reinforced through peer pressure.

See [Operating a Tractor](#) to determine if a youth is capable of safely operating a tractor.







# 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
Trialed 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 <b>NOT</b> 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				



# Operating a Tractor

## Can youth do this job safely?

Youth must be able to do/have all of the following to perform this job safely:

- Reach and operate controls while wearing a seatbelt
- Strength to repeatedly operate controls
- Tall enough for **good field of vision** when seated on tractor
- Understand and consistently repeat a 10-step process
- Recognize a hazard, problem solve, and respond appropriately
- React quickly to hazards
- **Mature** enough to consistently do what is expected
- **Think through** actions and consequences before acting
- Avoid loose clothing, clothes with strings, tie back long hair
- Comply with the [working outdoors guideline](#)
- Safely demonstrate the job 4 to 5 times
- Maintain [two-way communication](#) link



## Adult Responsibilities

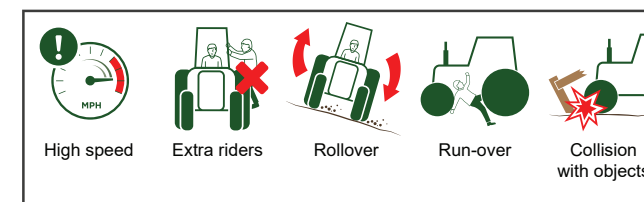
- Ensure tractor is mechanically sound and safety features are in place, including ROPS
- Review [developmental guidelines](#) to verify youth's ability to operate tractor
- Demonstrate how to safely drive tractor
- Provide appropriate training
- Educate youth to mount tractor using 3 points of contact
- Ensure work area is free from as many hazards as possible
- Educate youth on avoiding/addressing remaining hazards
- Ensure youth does not operate tractor after dark/in bad weather
- Train youth to call an adult if equipment malfunctions

## Supervision

*Note: Ensure tractor is sized appropriately for youth. Youth must be 16+ years to drive an articulated tractor. See [Tractor Operations Chart](#) for guidance.*

14-15 yrs	Intermittent supervision progressing to periodic
16+ yrs	Periodic supervision

## Hazards



## Protective Strategies

