

# **Making Farming Safe for Senior Farmers**

**A Project to Explore the Influences of the Aging Process on  
Farmers and its Implications on Safety and Health.**

**Project Chair Glen G. Blahey, CRSP  
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## **Project Team**

Lori Mitchell, MA., Researcher. Center on Aging, University of Manitoba

Laurel Strain, PhD., Advisor, Center on Aging, University of Manitoba

Pamela Hawranik, PhD., Advisor, Center on Aging, University of Manitoba

Ted Redekop, MD., Advisor, Manitoba Labour and Immigration

Norma Alberg, BN., MSc. (Epi), Advisor, Manitoba Labour and Immigration

Judith Guernsey, MSc., PhD., Advisor, Dalhousie University

Bruce Johnson, Advisor, British Columbia Farm and Ranch Safety Association

## **Background**

In Canada persons over the age of 60 years represent approximately 12% of the population. Approximately 33% of traumatic farm fatalities occur to individuals over the age of 60 years.

Currently, few resources are available in the agricultural sector to assist senior farmers and their families or employers in being able to assess individuals abilities to safely perform specific farming tasks.

The North American Guidelines for Children's Agricultural Tasks is an example of a practical user friendly resource for children's caregivers to assess a child's readiness for specific farm work. This model provided the insight and motivation to pursue this project.

## **Project Objectives**

1. Research and compile a profile of physical, cognitive and social characteristics and attributes of persons 60 years and older.
2. Develop a document that will outline the above attributes in relation to selected groups of tasks seniors might perform on farming operations in Canada.
3. Conduct focus group evaluations of the guidelines with a cross-section of the agricultural community that is targeted by this project.\*
4. Incorporate focus group recommendations, reproduce and make the guidance document available to interested parties across Canada.\*

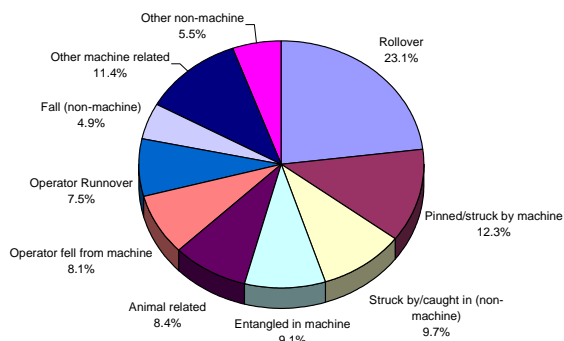
\*Given the scope of this undertaking, these activities have been deferred to future research and development work.

# Making Farming Safe for Senior Farmers

## Introduction

Persons aged 60 years and older represent approximately 13% of Canada's total farm population. This same grouping also accounts for over 33% of traumatic work related fatalities. Every year individuals as old as 90 years of age are killed while performing farm work.

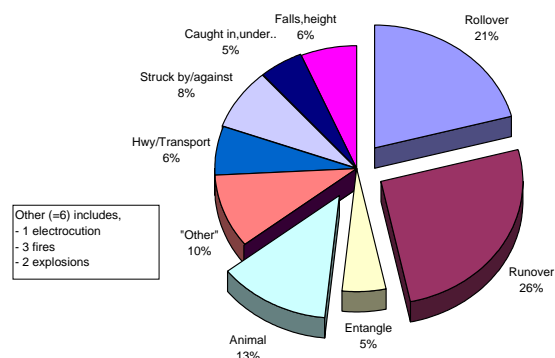
Work-related Farm Fatalities Among Older Adults (60+),  
1990 -1998, By Mechanism (323 deaths)



Source: Canadian Agricultural Injury Surveillance Program

FARM-RELATED FATALITIES IN MANITOBA  
AGE GROUP 60 YEARS+

1983 - 2001 (62 deaths)



Source: Workplace Safety and Health  
Division, Manitoba Labour and Immigration

Investigations of these deaths regularly produce evidence that most of these incidents were preventable. Prevention of workplace deaths can be accomplished through awareness, education and process change.

The purpose of this resource is to assist senior farmers and their partners and family members in understanding and recognizing the interplay of each individual's abilities with what they are working with and the environment in which they are working. Acknowledgement of personal limitations coupled with the recognition and control of hazards associated with each task performed will protect everyone in the agricultural workplace.

This resource was developed following concepts established by the North American Guidelines for Children's Agricultural Tasks. The farm operator should make the decision of who performs a particular task. The informed decision should be based upon the hazards of the task, the individuals physical and intellectual abilities, as well training and supervision available for the person who will be performing the task.

## What is Hazardous?

A hazard should be understood as an existing condition that has the potential to cause damage or harm. The degree of damage or harm will vary, however the potential or risk does exist unless steps are taken to control the hazard.

"Accidents" don't just happen! The interaction of a person, equipment, materials and the surrounding environment all play a role when someone is injured. Recognizing this interaction and adjusting who or how a task is performed will change the outcome.

As an example: In the process of feeding a large round bale of hay to a pen of cattle, the 'worker' may have to get off the tractor and remove the twine securing the bale. The most recognizable hazards including; cattle crowding to eat, a slippery uneven walking surface, bulky winter clothing, noise (tractor running, cattle bawling), presence of a bale feeder and so on. What does the person bring to these hazards? Conditions such as; ability to maintain balance, physical strength, dexterity to move among animals and peripheral vision are all important. These are some of the basic personal abilities necessary to safely perform the task. Factors such as glasses, medications which may effect balance, physical conditions causing shortness of breathe or conditions such as arthritis - limiting range of motion, all have the potential to place the individual at greater risk of injury.

The important point to remember is that the work can continue to be performed if the risk factors are recognized and steps taken to control the work situations to protect the worker.

### **Making Injury Prevention Work on Your Farm**

To create a safer farm work environment, talk about the hazards that exist with the people who have done or will be doing the work. Assess their abilities and then make the changes necessary to ensure that they will be able to perform the work safely.

The following tables will assist farm family members in understanding;

- (a) the changes in our bodies which can occur as we age,
- (b) the effects of medical conditions, medications and our life style and
- (c) planning work activities to compensate for any personal limitation resulting from the aging process, medical conditions or other factors.

**Table I** presents the inter-relationships of four factors affecting our abilities to perform tasks.

- **SYSTEM:** the specific body system that governs certain activities.
- **POTENTIAL AGE-RELATED CHANGES:** these are the system changes, which typically occur. It is important to recognize that each person is different and may not necessarily experience these changes at a specific time in their lives.

- **POSSIBLE FUNCTIONAL CONSEQUENCES:** the possible effect of the aging process on the system's functioning.
- **OTHER POTENTIAL INFLUENCES ON FUNCTION:** factors, other than age, that also can have an impact on the system's functioning

**Table II** presents several Job Safety Analysis worksheets for tasks commonly conducted by seniors. Several of these activities have resulted in deaths and serious injuries to older individuals.

The Job Safety Analysis worksheet examples set out the tasks, minimum abilities to safely perform the tasks, hazards of the tasks, personal risk factors and action plans to make the task safer. These worksheets are not complete, they are samples and the variability each individual brings to the task will determine the personal risk factors and action plans. These have to be completed for the individual who will be doing the job.

To effectively utilize these resources the following considerations should be made:

- It is important to work within personal physical limitations,
- recognize latency of medications and
- recognize environmental conditions including ice, snow, glare, noise, dust and varying light conditions which may combine to change an otherwise safe work situation to a hazardous one.



**TABLE I**

<b>SYSTEM</b>	<b>POTENTIAL AGE-RELATED CHANGES</b>	<b>POSSIBLE FUNCTIONAL CONSEQUENCES</b>	<b>OTHER POTENTIAL INFLUENCES ON FUNCTION</b>
<b>NEUROLOGICAL</b>	<ul style="list-style-type: none"> <li>• There are changes in the brain, which can decrease the person's ability to perform complex tasks quickly and efficiently.</li> <li>• It takes a longer time for the brain to interpret information coming from our eyes and ears, and for us to then respond with an action.</li> <li>• There are changes to the nerves controlling our muscles, which affect the body's sense of position and movement.</li> </ul>	<ul style="list-style-type: none"> <li>• Thought/ information processing slows down and may be incomplete. This means that you may make decisions based on less information.</li> <li>• You may have less tolerance for temperature changes or extremes of heat or cold.</li> <li>• There are changes in sleep patterns, which can affect your alertness.</li> <li>• There are changes to balance and a sense of stability, increasing your risk of tripping and stumbling.</li> </ul>	<ul style="list-style-type: none"> <li>• Stress, anxiety, depression may all reduce your ability to cope with daily tasks.</li> <li>• Diseases or conditions such as Alzheimer's disease further affect your abilities.</li> <li>• It takes less medication and alcohol to create impairment.</li> <li>• Health conditions including diabetes, heart disease, blood pressure problems can affect your abilities.</li> </ul>
<b>SENSORY</b> <ul style="list-style-type: none"> <li>• <i>VISION</i></li> </ul>	<ul style="list-style-type: none"> <li>• There are changes in the eyes, which can decrease your vision ability (clarity) and your night vision.</li> </ul>	<ul style="list-style-type: none"> <li>• There is less ability to judge distance. Objects that are moving are not seen clearly.</li> <li>• There is a decrease in your field of vision and the sharpness of what you see.</li> <li>• Poorer night vision will affect night driving.</li> <li>• You need more time to adapt to changes in light, going from indoors to outdoors, and recovering from sun glare.</li> </ul>	<ul style="list-style-type: none"> <li>• Diabetes can speed up these losses in vision abilities.</li> <li>• Eye conditions such as cataracts or glaucoma, and their medications, usually adversely affect your vision.</li> </ul>
<ul style="list-style-type: none"> <li>• <i>SMELL</i></li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• You lose the ability to identify certain smells or may not even smell them unless they are strong. You may lose the warning to a dangerous smell.</li> </ul>	<ul style="list-style-type: none"> <li>• Smoking affects your sense of smell (and taste).</li> </ul>

SYSTEM	POTENTIAL AGE-RELATED CHANGES	POSSIBLE FUNCTIONAL CONSEQUENCES	OTHER POTENTIAL INFLUENCES ON FUNCTION
<ul style="list-style-type: none"> <li><b>HEARING</b></li> </ul>	<ul style="list-style-type: none"> <li>Changes in the ear reduce its ability to pick up and respond to all sounds.</li> </ul>	<ul style="list-style-type: none"> <li>Some sounds become more difficult to hear, such as high-pitched noises and squeals.</li> <li>It becomes harder to hear one sound if there is a lot of background noise, such as hearing someone talking when there is machinery running.</li> <li>There may be a change in your sense of balance, which is controlled inside your ear.</li> </ul>	<ul style="list-style-type: none"> <li>Some medications can affect hearing. For example, Aspirin can cause ringing in the ear.</li> <li>Your ears can get plugged with wax, or from having a cold or ear infection.</li> <li>Long time exposure to noise may have already reduced your hearing without you realizing it.</li> </ul>
<ul style="list-style-type: none"> <li><b>TOUCH</b></li> </ul>	<ul style="list-style-type: none"> <li>Touch receptors in the skin deteriorate over time.</li> </ul>	<ul style="list-style-type: none"> <li>You have a reduced sense of touch, vibration and pressure</li> <li>You have a reduced ability to feel heat, cold, or pain.</li> </ul>	<ul style="list-style-type: none"> <li>Skin diseases like eczema reduce your sense of touch.</li> <li>Strokes and heart disease can reduce the sense of touch.</li> </ul>
<p><b>MUSCULOSKELETAL</b></p> <ul style="list-style-type: none"> <li><b>BONES</b></li> </ul>	<ul style="list-style-type: none"> <li>Our bones become weaker as we get older.</li> </ul>	<ul style="list-style-type: none"> <li>The bones break more easily, from less force or injury.</li> </ul>	<ul style="list-style-type: none"> <li>Thyroid disease affects the strength of your bones.</li> <li>The strength of your bones is related to how much activity and exercise you do (the more exercise, the better).</li> <li>Your bone strength depends on your food habits. You need enough calcium and vitamin D, especially from dairy products or vitamin pills.</li> </ul>
<ul style="list-style-type: none"> <li><b>MUSCLE</b></li> </ul>	<ul style="list-style-type: none"> <li>Our muscles become weaker and may shrink in size.</li> </ul>	<ul style="list-style-type: none"> <li>The decreased muscle strength and coordination makes it harder to lift and move heavy objects.</li> <li>The muscles need more time to react to a situation, for example, to jump out of the way.</li> <li>Changes to posture and balance can increase your risk of falling.</li> </ul>	<ul style="list-style-type: none"> <li>If you are not regularly active, your muscles will be in poor shape. They need exercise in order to stay healthy.</li> </ul>

SYSTEM	POTENTIAL AGE-RELATED CHANGES	POSSIBLE FUNCTIONAL CONSEQUENCES	OTHER POTENTIAL INFLUENCES ON FUNCTION
<ul style="list-style-type: none"> <li><b><i>JOINT &amp; CONNECTIVE TISSUE</i></b></li> </ul>	<ul style="list-style-type: none"> <li>Over time, our joints wear down from all the strain of daily activities.</li> </ul>	<ul style="list-style-type: none"> <li>There is a reduced feeling of stability, which can make you more prone to falling down.</li> <li>Regular wear and tear can produce joint stiffness, pain and swelling.</li> <li>The reduced joint mobility increases the risk of strains and sprains.</li> </ul>	<ul style="list-style-type: none"> <li>Previous injuries to joints affect their ability to perform.</li> <li>Joint diseases cause pain and reduce the joint's range of motion.</li> <li>Repeated heavy lifting puts extra wear and tear on the joints.</li> <li>Obesity puts extra strain on the joints.</li> </ul>
<p><b>CARDIOVASCULAR</b></p>	<ul style="list-style-type: none"> <li>The heart as a muscle to pump blood becomes stiff and weaker over time.</li> <li>The heart has changes to the blood vessels, which affect how well it does its work.</li> </ul>	<ul style="list-style-type: none"> <li>The blood pressure needs more time to adjust to a change in body position . For example, you may feel faint when first standing up after sitting or kneeling on the ground.</li> <li>You may tire easily or have trouble breathing during hard work activities.</li> <li>There is an increased risk of dizziness during hard work.</li> </ul>	<ul style="list-style-type: none"> <li>Any type of heart disease will negatively affect your heart health. For example, coronary heart disease will increase your tiredness and shortness of breath.</li> <li>Your general level of wellness is affected adversely by smoking, stress, poor nutrition, lack of exercise.</li> <li>Some medications may affect your heart and blood circulation.</li> </ul>
<p><b>RESPIRATORY</b></p>	<ul style="list-style-type: none"> <li>The lungs and chest wall become stiff and do not move as easily.</li> <li>The lungs are not able to accommodate as much air.</li> </ul>	<ul style="list-style-type: none"> <li>While doing hard work, breathing becomes strained and you may get tired more easily.</li> <li>There is an increased risk of getting lung infections.</li> </ul>	<ul style="list-style-type: none"> <li>Smoking or being around second hand smoke damages your lungs.</li> <li>Exposure to heavy dust, for example grain dust, can irritate your lungs.</li> <li>Exposure to toxic gases (for example, manure pit gases) and chemicals can damage your lungs.</li> <li>You may already have some lung disease from early years of exposure to substances, and you do not realize it.</li> </ul>

## **Conducting a Job Safety Analysis**

The following information considers the overall aspect of farm safety. When conducting a Job Safety Analysis for a job that a senior person is going to be performing added consideration must be given to the possible limitations the person brings to the task.

Those most familiar with a job are best suited to evaluate the risks associated with the particular job. They must consider it impartially and suppress thoughts about how it is done and focus on how the tasks should be performed to avoid injury or property damage.

The process of conducting a job safety analysis is straightforward. Refer to table II for examples of common farming tasks analyzed using a job hazard analysis format. The last column of each table is BLANK because it is your DECISION and how to control the hazards.

1. Identify a specific job someone performs
2. Break that job down into the individual steps or tasks required to complete the entire job.
3. Identify the potential hazards that are associated with performing each task.
4. Determine what actions or measures would be necessary to eliminate or control the hazards of each task.
5. Make the necessary changes through changes in equipment / product, engineering (guards or barriers) and ensure effective training.

### **Step 2 – Break the Job Down into steps.**

Every task can be broken down into steps and there is usually a particular order to the steps that is best. This sequence of steps will eventually become the basis of the safe work procedure.

Identifying every step of the task is essential to the end result. Ensure you consider *everything* the person doing the work will have to do. After each step is identified, you can go back and combine things or eliminate unnecessary detail.

To give a clear understanding of the task, the steps must include every key activity that is inherent in doing the task correctly, but exclude those that will over burden the process.

### **Step 3 – Identify potential hazards in each step.**

Examine every aspect of the task to determine potential hazards. Every aspect of the task should be considered, including safety, quality, and production. Also consider losses to the area or environment where the task is being done and possible long-term effects of performance.

### **Questions to ask:**

#### People:

- Could the worker be caught in, on or between? Struck by? Fall from? Fall into?
- What contacts are present that could cause injury, illness, stress, or strain.
- What practices are likely to downgrade safety, productivity, or quality?

#### Equipment:

- What hazards are presented by the tools, machines, vehicles or other equipment?
- What equipment emergencies are most likely to occur?
- How might the equipment emergencies cause loss of safety, productivity or quality?

#### Material:

- What harmful exposures are presented by chemicals, raw materials or products?
- What are the specific problems involving materials handling?
- How might materials cause loss of safety, productivity or quality?

#### Environment:

- What are the potential problems of housekeeping and order?
- What are the potential problems of sound, lighting, heat, cold or ventilation?
- Is there anything in the area that would be seriously affected if there are problems with the task?
- Has the external as well as the work environment been considered?

### **Step 4 – Actions to Eliminate / Control the Hazardous Situation**

Making an improvement check is simply determining if the work being considered can be done in a better way (change). When change is introduced with structure, planning, innovation, the workers involvement, change can be good. This contributes to improvements in safety, quality, productivity and cost control.

To conduct an improvement check, start with; Who – What – When – Where – Why questions. For example:

1. Who is best qualified to do it?
2. Where is the best place to do it?
3. When should it be done?
4. What is the purpose of this step?
5. Why is this step necessary?
6. How can it be done better?

Analyze the work in terms of Safety and how it interacts with the People, Equipment, Materials and Environment involved.

## Step 5 – Making Changes

Determine actions and precautions that will prevent a potential loss from occurring or minimize its effect if it were to occur. Ideas for controls will naturally have been generated throughout the previous exercises, keeping in mind that controls should be directed to the individual or individuals doing the task, by telling them how to avoid, eliminate, or reduce the loss exposures.

### Control Methods:

#### Engineering Controls

- ♦ Isolation (protect the worker from the hazard)
- ♦ Dilution/Removal (proper ventilation around chemicals)
- ♦ Process Modification/Redesign (eliminate hazards found in tasks)
- ♦ Substitution (replace the hazardous material with less toxic material)
- ♦ Shielding/Barriers (placing a barrier between the workers and hazardous sources)

#### Administrative Controls

- ♦ Education (education in all aspects of workplace safety and health)
- ♦ Job Rotation (worker's exposure is limited by the time they do a particular task)
- ♦ Work Assignments (workers are reassigned should exposures reach levels above the standard)

#### Personal Protective Equipment

- ♦ ***Last Resort***
- ♦ Workers must be trained about use, maintenance, and limitations.

### Evaluation:

Ensure that all control measures you implement are evaluated to ensure they are effective.

In addition to these basics, when we discuss assessing the safety of a farm job for a senior to perform (or for that matter anyone) we have added two additional columns:

1. Minimum ability to safely perform the task. This means what abilities does a person have to have in order to safely do the task.
2. Personal risk factors. This refers to conditions that an individual may have which could make an otherwise safe activity dangerous. For example if the individual does not have the strength to move or activate a control - can they safely perform that task?

**TABLE II****Job Safety Analysis****Job Description***Feeding large round hay bales to cattle in a pen using a tractor with front-end loader*

<b>Specific Task</b>	<b>Minimum Ability to Safely Perform Task</b>	<b>Hazards of Task</b>	<b>Personal Risk Factors</b> (to be completed by individual familiar with operator)	<b>Action Plan</b> (to be completed by farm manager)
Mounting / starting up tractor	<ul style="list-style-type: none"> <li>- knowledge of controls &amp; machine capabilities</li> <li>- dexterity</li> <li>- strength / flexibility to operate controls</li> </ul>	<ul style="list-style-type: none"> <li>- slip / fall from machine</li> <li>- loss of control of machine</li> </ul>	<i>e.g. occasionally losses balance, has limited strength in one arm / leg</i>	<i>e.g. training if physical limitations can not be managed - assign a less dangerous job</i>
Driving to hay storage area	<ul style="list-style-type: none"> <li>- same as to start and operate, plus</li> <li>- good eye sight</li> </ul>	<ul style="list-style-type: none"> <li>- loss of control of machine</li> </ul>	<i>e.g. limited range of motion - can't turn head to look back over shoulder when backing machine</i>	<i>e.g. installing rear view mirrors</i>
Picking up bale	<ul style="list-style-type: none"> <li>- spatial perception</li> <li>- sense of balance</li> </ul>	<ul style="list-style-type: none"> <li>- improper spearing of bale (could fall off or make tractor off balance)</li> <li>- knocking over other bales</li> </ul>	<i>e.g. limited eye sight</i>	<i>if physical limitations can not be managed - assign a less dangerous job</i>
Driving into pen	<ul style="list-style-type: none"> <li>- as above</li> </ul>	<ul style="list-style-type: none"> <li>- slip / fall when leaving tractor to open / close gate</li> </ul>		<i>e.g. additional hand grabs, extra step</i>
Positioning bale	<ul style="list-style-type: none"> <li>- as above</li> </ul>	<ul style="list-style-type: none"> <li>-</li> </ul>		
Removing twine	<ul style="list-style-type: none"> <li>- control cattle crowding in to eat</li> <li>- management of twine</li> </ul>	<ul style="list-style-type: none"> <li>- falling tripping on ground materials / twine</li> <li>- being knocked down / trampled by cattle</li> </ul>		<i>if physical limitations can not be managed - assign a less dangerous job</i>
Positioning bale feeder over bale	<ul style="list-style-type: none"> <li>- as above</li> <li>- if done manually then physical strength to lift / maneuver feeder</li> </ul>	<ul style="list-style-type: none"> <li>- damage to feeder with loader</li> <li>- manually - strains / crushes if feeder drops</li> </ul>		<i>if physical limitations can not be managed - assign a less dangerous job</i>
Exiting pen	<ul style="list-style-type: none"> <li>- same as entering pen</li> </ul>	<ul style="list-style-type: none"> <li>- same as entering pen</li> </ul>		

## Job Description

Clear manure from loose housing livestock barn with front-end loader

Specific Task	Minimum Ability to Safely Perform Task	Hazards of Task	Personal Risk Factors (to be completed by individual familiar with operator)	Action Plan (to be completed by farm manager)
Conduct pre-operational check / start-up	<ul style="list-style-type: none"> <li>- knowledge of controls &amp; machine capabilities</li> <li>- manual dexterity</li> <li>- strength / flexibility to operate controls</li> </ul>	<ul style="list-style-type: none"> <li>- slip / fall from machine</li> <li>- loss of control of machine</li> </ul>	e.g. <i>limited range of motion - can't turn head to look back over shoulder when backing machine</i>	<ul style="list-style-type: none"> <li>- familiarize everyone with equipment</li> </ul>
Attach manure fork to front end loader	Good eye sight, spatial perception, multi tasking Physical ability to move fork	<ul style="list-style-type: none"> <li>- slip / fall</li> <li>- strain</li> <li>- loss of control</li> </ul>		<ul style="list-style-type: none"> <li>- two people req'd.</li> </ul>
Drive to barn	Peripheral vision Knowledge of yard obstacles	<ul style="list-style-type: none"> <li>- collision with support walls</li> </ul>		-
Enter barn and load fork	Spatial perceptions, peripheral vision, ability to adjust to different light levels	<ul style="list-style-type: none"> <li>- damage to structure / equipment</li> </ul>		<ul style="list-style-type: none"> <li>- improve lighting</li> </ul>
Lift load	Good sense of balance / equilibrium Depth perception	<ul style="list-style-type: none"> <li>- overloading / upset</li> <li>- damage to building</li> </ul>		-
Back out of barn	Body range of motion (look over shoulder) Depth perception Able to adjust from dark to light	<ul style="list-style-type: none"> <li>- damage to building / equipment</li> <li>- upset of loader</li> </ul>	Bi-focal glasses, arthritis	<ul style="list-style-type: none"> <li>- rear view mirrors</li> <li>- improve lighting</li> </ul>
Drive to spreader / pile	Spatial perceptions / sense balance of machine	<ul style="list-style-type: none"> <li>- loss of control</li> <li>- upset of loader</li> </ul>		<ul style="list-style-type: none"> <li>- identify obstacles</li> </ul>
Raise loader / dump load	Sense balance of machine, peripheral vision, spatial perception	<ul style="list-style-type: none"> <li>- collision with other equipment</li> <li>- loader overturn</li> </ul>		
Back away / repeat	Body range of motion	<ul style="list-style-type: none"> <li>- damage to equipment</li> </ul>		

## Job Description

Working with large animals in a corral

Specific Task	Minimum Ability to Safely Perform Task	Hazards of Task	Personal Risk Factors (to be completed by individual familiar with operator)	Action Plan (to be completed by farm manager)
Entering pen / corral	Good eyesight / balance	Kick / stepped on / charged		
Herd animals to pre-determined site	Good eyesight / balance / quick on legs	Trips / falls		
Segregate animal(s) from group	Quick on legs / able to multi task			
Move animal(s) to chute or other pen(s)	As above	As above plus backing over by animal		
Secure individual animal in squeeze chute for treatment / work	Quick reactions / multi - tasking	Pinches, as above		
Administer treatment(s)	Good eyesight / steady hands (needle control)	Needle sticks		
Release animal	Chute experience quick reflexes	Struck by chute parts		

### General considerations

- a) have experience
- b) be agile good and quick on feet
- c) know your subject animals bulls/ cows / heifers / steers
- d) being charged upon / kicked or stepped on
- e) segregation or sort certain types requires experience
- f) close quarters chutes / alleys crowding area are places of close contact results in kicking / charging / run by kicks
- g) needle work requires experience, quickness ability to not give yourself a shot.
- h) chute - break fingers / arm / hands



## Job Description

Operating self-propelled equipment on slopes

Specific Task	Minimum Ability to Safely Perform Task	Hazards of Task	Personal Risk Factors (to be completed by individual familiar with operator)	Action Plan (to be completed by farm manager)
Pre-operational service /inspection of equipment / start-up	<ul style="list-style-type: none"> <li>- knowledge of controls &amp; machine capabilities</li> <li>- dexterity</li> <li>- strength / flexibility to operate controls</li> </ul>	<ul style="list-style-type: none"> <li>- slip / fall from machine</li> <li>- loss of control of machine</li> </ul>	<i>e.g. limited range of motion</i> <i>- can't turn head to look back over shoulder when backing machine</i>	
Drive equipment to work location	<ul style="list-style-type: none"> <li>- good eyesight</li> <li>- spatial perception</li> <li>- ability to hear surrounding noises</li> </ul>	<ul style="list-style-type: none"> <li>- collision with traffic / field objects</li> </ul>		
Switch from transport position to operating	<ul style="list-style-type: none"> <li>- physical ability to move / adjust equipment</li> </ul>	<ul style="list-style-type: none"> <li>- strain</li> <li>- incomplete connections</li> </ul>		
Begin working along slope	<ul style="list-style-type: none"> <li>- sense of balance / judgement</li> <li>- range of body motion</li> <li>- good eyesight / hearing</li> </ul>	<ul style="list-style-type: none"> <li>- overturn</li> <li>- inability to monitor machine performance</li> <li>- failure to notice obstacles</li> </ul>		

### Job Description

Feed Grinder - operating stationary equipment (rotating shafts)

<b>Specific Task</b>	<b>Minimum Ability to Safely Perform Task</b>	<b>Hazards of Task</b>	<b>Personal Risk Factors</b> (to be completed by individual familiar with operator)	<b>Action Plan</b> (to be completed by farm manager)
Hook up tractor to grinder	<ul style="list-style-type: none"> <li>- knowledge of tractor operation</li> <li>- flexibility to maneuver tractor</li> </ul>	<ul style="list-style-type: none"> <li>- collision</li> <li>- pinches / strains</li> </ul>		
Check / service grinder	<ul style="list-style-type: none"> <li>- knowledge of grinder operation / maintenance</li> <li>- understanding of safety devices / guards</li> </ul>	<ul style="list-style-type: none"> <li>- entanglement</li> </ul>		
Position grinder	<ul style="list-style-type: none"> <li>- ability to drive (back -up) and maneuver tractor with towed equipment</li> <li>- spatial perception</li> </ul>	<ul style="list-style-type: none"> <li>- collision equipment damage</li> </ul>		
Run augers	<ul style="list-style-type: none"> <li>- knowledge of start / stop controls</li> <li>- physical ability to position equipment</li> <li>- good vision / hearing to monitor operation of equipment</li> </ul>	<ul style="list-style-type: none"> <li>- entanglements</li> <li>- lost grain</li> <li>- strains</li> <li>- dust inhalation / disorientation</li> <li>- noise / inability to hear others</li> </ul>		
Add supplement(s)	<ul style="list-style-type: none"> <li>- physical ability to manually handle materials</li> </ul>	<ul style="list-style-type: none"> <li>- strains</li> <li>- entanglements</li> </ul>		
Sample mix	<ul style="list-style-type: none"> <li>- physical dexterity, peripheral vision</li> </ul>	<ul style="list-style-type: none"> <li>- entanglements</li> </ul>		
Unload into feeders	<ul style="list-style-type: none"> <li>- peripheral vision, upper body flexibility to look back</li> <li>- ability to open hatches, position unloading auger</li> </ul>	<ul style="list-style-type: none"> <li>- collision</li> </ul>		

**Job Description**

Operating ATV's

<b>Specific Task</b>	<b>Minimum Ability to Safely Perform Task</b>	<b>Hazards of Task</b>	<b>Personal Risk Factors</b> (to be completed by individual familiar with operator)	<b>Action Plan</b> (to be completed by farm manager)
Check machine before starting / secure tools / equipment on racks	- knowledge of operating characteristics - strength to lift / move ATV - flexibility / manual dexterity	- loss of balance - extra tools / equipment falling		
Mount machine	- flexibility / balance - also as above	- slips / falls		
Start engine	- strength to manually start / move ATV - also as above	-		
Drive to work location	- good eye sight - hand - eye coordination	- collision / rollovers		
Perform work	- ability to multi-task			
Return	- same as drive to work			

**General Considerations**

- varying terrain varies machine stability
- upper body strength is essential to control machine
- NO RIDERS
- Basic personal protective equipment is required at all times
- Working knowledge of machine operation and stability
- Extra lighting, electric start, running boards and automatic transmission help less able bodied persons operate the ATV