



Hazard and Risk Assessment Workshop

Charlotte Crooks
Farm Safety Coordinator

Tara Huestis
Farm Safety Specialist

Farming and Safety

- Hazards on a farm are an unavoidable reality.



Occupational Health and Safety Act

Employer's General Duties

- Provide equipment and materials in safe condition
- Provide training to workers
- **Identify hazards to workers**
- Ensure workers know the proper use of safety devices, equipment and clothing
- Consult with workers on health & safety issues

Due Diligence

"Due diligence" is important as a legal defense for a person charged under occupational health and safety legislation. If charged, a defendant may be found not guilty if he or she can prove that due diligence was exercised.

The defendant must be able to prove that all precautions, reasonable under the circumstances, were taken to protect the health and safety of workers.

Due Diligence

Ask :

- Can a reasonable person predict or foresee something going wrong?
- Is there an opportunity to prevent the injury or incident?
- Who is responsible for preventing the accident or incident?

Canadian Centre for Occupational Health and Safety

What is a Risk Assessment?

- It is a close look at the workplace to identify things or situations that could cause harm to people.
- Once they are identified, you (the employer) decide how severe the risk is and if there are precautions that you could take to prevent harm.

Using Risk Assessment

- People do risk assessments every day without even thinking about it.
- “If I don’t get my wife a birthday gift, she’s going to divorce me.”
- “If I don’t fully stop at the stop sign, I might get struck by another car.”

Hazard Vs. Risk

- **Hazard** is the situation or condition that could hurt us (eg: getting hit by a moving car, working from a ladder, electricity)
- **Risk** is the likelihood that the hazard can cause injury
 - Can increase or decrease

Risk Assessments

Step 1: Identify the hazards

Step 2: Assess the risks

Step 3: Determine control measures

Step 4: Record and implement actions

Step 5: Review and update

Step 1: Hazard Identification



Identifying hazards are key to preventing injuries and illness on the farm.

Step 1: Hazard Identification

- Walk around the farm
- Ask employees about hazards
- Consult industry standards
- Check manufacturers' instructions
- Check accident records

Fatalities in Canada 1990-2006

1. Rollovers (20.5%)
2. Runovers (18.6%)
3. Entangled (8.3%)
4. Collision (7.3%)
5. Pinned or struck by machine (7.0%)
6. Animal related (5.9%)
7. Struck by object (non-machine)(5.3%)

Source: Canadian Agriculture Injury Surveillance Program

Safety Hazards

Machine

Includes hazards from moving parts like rotating shafts, belts, pulleys, blades and saws.



Safety Hazards

Energy

Includes hydraulic pressure, steam, heat, electricity



Safety Hazards

Material Handling

Includes Manual and mechanical handling.

- Lift trucks and conveyors
- Handling chemicals



Health Hazards

- Chemical – Compressed gasses, solvents
- Physical – Noise, vibration, heat
- Biological – Mould, Bacteria, viruses
- Ergonomics –workplace design, repetition



Step 2: Assess the Risks

Risk is the chance that an existing hazard may cause harm or injury.

Ask:

- Is it likely or unlikely to occur?
- How often?
- Could it cause death, serious injury or minor injury?

Risk Factors

People:

Training, age of worker, stress, experience, not following safety rules



Risk Factors

Equipment:

Guarding, maintenance, warning signs

Are we using the right tools for the job?



Risk Factors

Materials:

Type of material handled

Amount of material handled

Exposure to material



Risk Factors

Environment:

weather conditions, terrain, slopes, lighting, ventilation, noise



Risk Factors

Process:

Pace and type of work, how the work is done, safety rules, procedures



Rank the Hazards

- **Impact/Degree of Harm**
 - Consider the impact the hazard can have to safety, production, environment, or property damage
- **Probability**
 - Frequency of exposure to the hazard
 - Percentage of workers exposed
 - Probability of occurrence (has it happened before?)

Risk Analysis Matrix

E - Extremely High H - High M - Moderate L - Low	Frequent	Likely	Occasional	Seldom
Major Death, permanent disability	E	E	H	H
Serious Serious bodily injury	E	H	H	M
Minor Casualty treatment	H	M	M	L
Negligible First Aid only, no lost time	M	L	L	L

Step 3: Determine Control Measures

Control the Risk:

Find ways to control or eliminate the hazard to decrease the risk of injury.

Ask:

What am I already doing?

What else can I do to reduce the risk?

Control the Hazard

1. Eliminate
2. Substitute
3. Engineering
4. Administrative
5. Personal Protective Equipment (PPE)

Control the Hazard

Eliminate: Get rid of the hazard.

Cull a cross bull, get rid of faulty machinery,
put hilly terrain to pasture land



Control the Hazard

Substitute: Substitute something safer that will do the same task.

Material, chemical, machine, work practice



Control the Hazard

Engineering: Designs that separate the worker from the hazard.

Machine guards, ROP, fence, locate bins away from power lines, ventilation, lock out/tag out, emergency shut off.



Control the Hazard

Administrative: Safe work procedures that reduce the risk.

Safety rules, worker training, job rotation, signs



Control the Hazard

Personal Protective Equipment (PPE):

The last line of defense.

Respirator, gloves, work boots, hearing protection



Step 4: Record and Implement

- Begin with the hazards that have the highest risk of injury or death.
- Consider short term and long term solutions.
- Assign a person responsible for actions.
- Inspect hazards to make sure that control measures are still in place.

Step 4: Record and Implement

Record:

- The results of the risk assessments
- Person responsible for implementing a control and date completed

Keep Records:

- Risk Assessment
- Safety rules
- Training Logs
- Maintenance Logs
- New procedure

“If it’s not written down, it didn’t happen!”

Step 5: Review and Update

When?

- Annually
- New equipment
- New products
- New hazards

Step 5: Review and Update

Ask:

- Can I make an improvement?
- Have there been incidents?
- Have workers spotted a problem?

