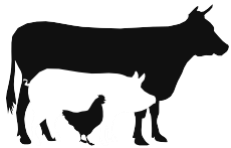




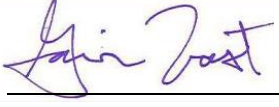
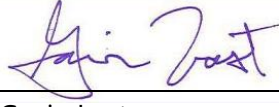
Ministry of  
Agriculture, Food  
and Fisheries



## Farmgate and Farmgate Plus SlaughterRight Manual

Prepared by:  
B.C. Ministry of Agriculture, Food and Fisheries  
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## Document Control

Date	Version	Version Changes	Approval
2021-02-04	1	Original version	 Gavin Last, Executive Director, Food Safety Inspection Branch
2021-06-16	1.01	Updates to formatting and language	 Gavin Last, Executive Director, Food Safety Inspection Branch

## LEGAL DISCLAIMER

These materials are intended to provide training on food safety, and hygienic and humane slaughter only. It remains the responsibility of every person to ensure they meet all applicable legislative, regulatory and licensing requirements of the federal, provincial and local governments in operating a slaughter establishment, including but not limited to safe food handling, avoidance of contamination, and humane slaughter.

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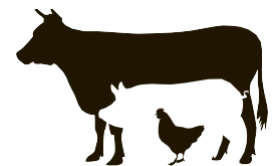
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**This box is an indicator of key learning points throughout this document.**



# WELCOME TO THE SLAUGHTERRIGHT TRAINING

## Introduction

This B.C. Ministry of Agriculture, Food and Fisheries training resource is designed to support producers who intend to become licensed as a rural slaughter establishment and process their livestock and poultry through on-farm slaughter. The completion of this course is mandatory for all Farmgate and Farmgate Plus slaughter establishment licence holders.

Congratulations for choosing to make a very important contribution to your community by producing safe, local food!

It is your responsibility to meet all legislative and licensing requirements and ensure that the meat and meat products you produce are safe, and free from contamination that can cause serious illness.

By taking this course, you are taking an important step in learning about food safety and ensuring that your customer can have full confidence in your operation and products. The focus of this course is to understand critical food safety points in the slaughter process that need to be considered and managed so that meat does not become contaminated. The course will also reinforce your awareness and understanding of enhanced animal welfare practices.

This course is not intended to teach participants how to slaughter. Slaughtering an animal correctly is a skill and a responsibility. Food safety, the welfare of the animal, and meat quality all depend on the slaughter person. Do not attempt slaughtering your animals if you are not qualified and trained to do so! Consider hiring a competent person with the necessary skills and training to do this job for you, or to mentor you until you acquire the necessary skill, knowledge and experience.

## Background

Whenever livestock or poultry are slaughtered in B.C. for human consumption, the operator of the slaughter facility, farm or slaughter site must have a provincial or federal slaughter licence. The exception to this rule is when farmers slaughter their own animals, on their own property for the personal consumption of their household.

Provincially licensed slaughter establishments in B.C. are licensed under the B.C. Meat Inspection Regulation (MIR) and are part of a “graduated licensing system.” Several different licences are available under this system for different sizes and types of slaughter establishments.

## Completing SlaughterRight

The SlaughterRight training manual is designed to be a self-paced and self-guided resource. There is no time limit to complete the training, however your Farmgate and Farmgate Plus licence application is not complete until you have completed the training.

Provided with this training manual is a workbook that you will have to complete. Throughout the training manual you will be asked to complete workbook questions and exercises. By the end of this training, you will have completed the following:

- SlaughterRight learner’s workbook, including both:
  - A Food Safety Plan, containing:
    - standard operating procedures, and
    - sanitation standard operating procedures; and
  - A Humane Slaughter Plan specific to your operation.

The final step to complete the training will involve a meeting with a representative of the BC Meat Inspection Program. The meeting will provide an opportunity for you to ask questions that may have arisen as you worked through the training and to discuss your required plans and procedures documents. There may be a need to have more than one meeting with BC Meat Inspection staff if further refinements are required prior to having an approved food safety plan and humane slaughter plan.

Once the Meat Inspection Program representative approves your food safety and humane slaughter plans and the workbook is completed, you will be assigned a SlaughterRight Registration number. Your application for your rural slaughter establishment will then proceed through the next approval steps.

### **Opportunity to Refresh your Knowledge**

The SlaughterRight material will be updated as the industry continues to adopt better practices and technology. You will be required to complete the training again when your licence expires and you proceed to replace the licence. While an amendment to your licence (i.e. adding an additional species to slaughter) may not require you to complete a training workbook, you will need to update your standard operating procedures and sanitation standard operating procedures contained in your Food Safety Plan to reflect the new species that you plan to slaughter prior to your licence being amended.

### **We are here to help!**

While you will be completing this training in a self-paced and self-guided manner, it is important to know that you are always welcome to contact the BC Meat Inspection Program with any questions that you may have with the training material.

Please email your questions to:

[Provincial.Coordinator@gov.bc.ca.](mailto:Provincial.Coordinator@gov.bc.ca)

A representative from the BC Meat Inspection Program will respond to your email or call you back if you provide your contact information.

# MODULE 1 - FOOD SAFETY AND SLAUGHTER HYGIENE

## 1.1 Facility Design and Food Safety

### 1.1.1 Good Slaughter Practices

Meat processors have the responsibility to follow all legislative and license requirements and ensure meat processed is safe for human consumption. This means that all the necessary steps are taken to prevent contamination of meat with disease-causing organisms, chemical contamination and physical hazards. This section provides information about important ways to ensure meat is produced and handled safely on the farm and slaughter site.

Good slaughter practices are the steps undertaken by a facility to ensure meat products are protected from contamination and only meat fit for human consumption is produced. A properly designed slaughter area is the backdrop to these practices.

1. The slaughter area, building and equipment are checked for cleanliness prior to the start of operations.
2. Workers are in good health, properly trained, wear appropriate clothing, and perform activities in a way that does not compromise finished product quality.
3. Animal handling is done in a humane manner.
4. Animals are checked before slaughter to ensure only fit animals are processed.
5. Operating procedures are in place to minimize product contamination and controls are in place to remove contamination when it does occur.
6. The carcass is checked after dressing to ensure the meat is free of contamination and all pathological conditions.
7. Carcasses are chilled immediately after dressing.
8. Waste is disposed of away from the slaughter area and in such a way that it minimizes the attraction of pests.
9. Sanitation programs and procedures for the slaughter area and equipment are in place.
10. Specified Risk Material is correctly handled, separated and disposed of using approved methods.
11. All packaging materials are stored away from contaminants.
12. All chemicals, cleaners and poisons are stored away from meat processing areas and packaging materials.
13. Water supply meets quality standards and testing requirements.
14. Effective pest control measures are in place and checked regularly.
15. Consumer complaints to the producer are recorded and a recall procedure is in place and reported to the BC Meat Inspection Program.

### Critical Control Points at Slaughter

A Critical Control Point is a step in the slaughter process where a food safety hazard can be controlled and subsequent steps in the preparation process will not eliminate the hazard if it is not controlled at this point. Critical Control Points must be monitored, have upper (or lower) limits applied, and corrective actions identified.

Following good slaughter practices throughout the slaughter process minimizes the critical points where contamination can occur and helps ensure only meat fit for human consumption is produced.

**Example of a Critical Control Point (CCP) at Slaughter:**

Critical Control Point	CCP Monitoring	CCP Limit	CCP Corrective Action
Final carcass trimming of contamination and pathological conditions	Check that the carcass is properly trimmed of all contamination, pathological conditions and inedible material prior to final wash	No contamination or pathological condition present	Re-trim carcass until all contamination and pathological conditions are removed

**COMPLETE ACTIVITY 1.1.1**

**1.1.2 Facility Design and Equipment**

**Slaughter Area**

Rural slaughter establishments must be designed to facilitate the production of safe meat products, and to ensure the humane treatment of animals. There are many points in the slaughter process, which if not properly controlled, can lead to contamination of the finished product.

The design of the establishment must be specific to the species being slaughtered and should reduce potential contamination by:

- enabling proper slaughter techniques and product flow where carcasses move from an area of greater contamination to an area of lesser contamination;
- having indoor dressing areas that provide protection from the elements and potential sources of carcass contamination such as pests, other animals and dust;
- having adequate space and equipment to properly cool and store carcasses;
- facilitating cleaning and sanitation by providing adequate sanitation facilities, lighting, and drainage, and
- keeping incompatible areas separate; for example, storage areas or areas intended to provide sales and service to clients should be separate from areas where carcasses are handled.

The establishment must also have or ensure the following:

- Finished surfaces that are durable, smooth, easy to clean, impervious to water, and non-toxic. This includes walls, floors, ceilings, tables and tubs.
- Well maintained equipment that is suitable for its intended purpose.
- Clean potable water is available.
- Hand and equipment cleaning and sanitizing facilities.
- Designated areas and appropriate housing for animals to be slaughtered.
- The establishment is situated so that runoff water drains away. This will assist with cleaning and sanitation, as well as ensuring that runoff water does not contaminate the dressing areas or carcasses.
- The establishment is situated away from other potential sources of contamination and any area that is incompatible with the safe handling of a carcass.
- Vehicle access should be provided to allow for the transportation of live animals as well as carcasses and meat products to and from the rural slaughter establishment.

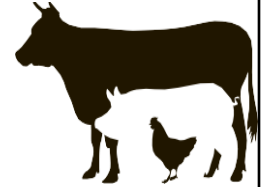


## Equipment

Equipment must be designed, constructed and installed to minimize the risk of contamination of meat, meat products or packaging. All equipment must be assembled, installed, calibrated and maintained according to manufacturer guidelines.

### Equipment must be designed and constructed so that:

- so that all parts are readily accessible for cleaning;
- all parts are made from corrosion-resistant material, free of noxious elements, and capable of withstanding repeated cleaning, and
- contamination does not occur due to the leakage of lubricants, metal filings, or other substances.



Equipment used for collecting, holding and transferring condemned and other inedible material should be:

- Water-tight
- Covered
- Distinctly marked for identification
- Made of industrial grade nontoxic plastic or rust-resistant metal

Tables and meat contact surfaces must be constructed with materials that are:

- Smooth
- Non-corrosive
- Rust-resistant
- Non-toxic
- Non-absorbent
- Able to withstand repeated cycles of cleaning and sanitizing

## Sanitation Facilities

When a slaughter facility is issued a licence, it is mandatory that the facility and equipment are maintained in a sanitary condition. An unsanitary facility creates a significant food safety hazard because it contributes directly to the contamination of meat products. Sanitation refers to cleaning and disinfecting before and during operations to prevent and remove unwanted contaminants, such as food residues, bacteria, rust, and dust.

The licence holder has a duty to ensure that the facility operates under hygienic and sanitary conditions. To do this, licence holders must conduct a pre-operational inspection to confirm that the facility and equipment are clean and working properly at the start of slaughter and they must conduct on-going housekeeping and maintenance activities throughout the slaughter operation.

### Hand wash stations

1. Hand wash stations must be readily accessible in all slaughter and processing areas.
2. All stations must have hot and cold running water.
  - Each station must be equipped with an accessible soap dispenser, individual single use towels and a garbage can.

### Facility and Equipment Sanitizers

1. Either hot water or chemical sanitizers (e.g. bleach) must be used. Chemical sanitizers must be used as per the manufacturer's instructions.
  - Sanitizers all work best at the correct dilution. If they are too weak, they do not work effectively so it is important to follow the manufacturer's instructions provided on the label.
  - Some sanitizers are toxic, and residue must be rinsed off.

- Sanitizers need time to work - the required contact time varies and may be seconds or minutes: check the label.
  - Sanitizing solutions should be mixed as and when needed then put into labeled spray bottles for use on bench tops, fridges, door handles and other surfaces.
  - Check the dilution, contact time, safety precautions, shelf life and storage of all chemicals before use.
2. Hot water sanitizers must use potable water.
    - The temperature of hot water sanitizers must be maintained at no less than 82°C (180°F).
    - A continuous flow of fresh water is required to ensure the sanitizer pot remains clean.
    - Knives and tools should be cleaned before placing in the sanitizer pot.
  3. Sanitizing stations must be located in the kill area and in areas where carcasses are dressed.

### **Bleach as a Sanitizer**

Bleach is a strong and effective sanitizer. Its active ingredient, sodium hypochlorite, denatures protein in micro-organisms and is therefore effective in killing bacteria, fungus and viruses. However, bleach breaks down and becomes ineffective when exposed to proteins; therefore, it is important to remove any meat residue before sanitizing with bleach. Bleach should be diluted to 10% when mixed with water (nine parts water to one part bleach).

### **Facility Cleaning and Sanitation**

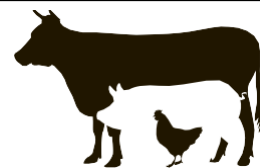
It is important to understand the difference between cleaning and sanitizing. To “clean” means to remove dirt or soil. To “sanitize” means to kill the disease-causing germs on utensils, equipment and work surfaces.

Cleaning and sanitizing should occur at the start and end of the processing day, and as often as needed while operating. Knives and hand tools must be sanitized regularly during slaughter to prevent contamination of the finished carcass.

Effective cleaning must occur before sanitizing. Sanitizers are more effective when all visible contamination has been removed from the food contact surface or utensil because microorganisms remain embedded and protected in the organic matter and cannot be properly deactivated by sanitizing chemicals.

#### **Effective Cleaning and Sanitation**

- Cleaning is achieved with detergent, potable water and scrubbing, with the visible dirt and detergent then rinsed off with clean water.
- Detergents are chemicals that remove dirt and grease, however detergents do not kill bacteria and other microorganisms.
- Sanitation refers to the killing of microorganisms through chemical substances or hot water heated to at least 82°C.



### **Pest Control**

Pests are a food safety risk since they can contaminate food with pathogens. For this reason, care must be taken to ensure pests cannot come into contact with meat at any time. Types of pests you should consider include:

You must develop systems to ensure pests are kept away from the slaughter area and do not come in contact with the carcasses during slaughter. Effective pest control includes the consideration of pest

prevention, control and monitoring.

Besides preventing the establishment of pests, effective pest control should include active measures to remove pests already present. You must conduct regular inspections of your field or farm to check for pest infestation. If there is evidence of an infestation, you should take immediate action to bring the situation under control.

If you are using pesticides on your farm or slaughter site, ensure your food safety plan includes detailed information about which pesticides you will be using, how they will be used, and where and how they will be stored.

### Facility Design

Element	Unacceptable	Acceptable
Site used during the slaughter process is suitable for preventing contamination of meat	<ul style="list-style-type: none"> <li>• No designated areas</li> <li>• Dirty area</li> <li>• Mud</li> <li>• Area not separated from other animals</li> <li>• Slaughter done in the presence of other animals that could stray into the site</li> <li>• On top of a septic field.</li> <li>• Evidence of faecal or mould contamination (e.g., birds/bats in rafters)</li> </ul>	<ul style="list-style-type: none"> <li>• Designated areas (e.g., holding pens, kill/bleed, skinning, scalding, etc.)</li> <li>• Surface clean, flat and dry</li> <li>• Clean sturdy tarps are used</li> <li>• Dust-free</li> <li>• No crowding</li> <li>• Isolated from other animals</li> <li>• Well drained</li> <li>• No obvious sources of contamination from the rafters (e.g., birds/ bats)</li> <li>• Facilities available for handwashing</li> </ul>
Good visibility of animal and carcasses	<ul style="list-style-type: none"> <li>• Dim, dark conditions</li> </ul>	<ul style="list-style-type: none"> <li>• Daylight outside or well-lit area</li> </ul>
Equipment is maintained to prevent contamination of meat	<ul style="list-style-type: none"> <li>• Rusty</li> <li>• Cracked</li> <li>• Broken</li> <li>• Greasy</li> </ul>	<ul style="list-style-type: none"> <li>• In good repair</li> <li>• Maintained according to manufacturer's recommendations</li> <li>• Rust-free</li> </ul>
The facility operates under hygienic and sanitary conditions	<ul style="list-style-type: none"> <li>• No running water</li> <li>• No hot water</li> <li>• No soap or towels</li> <li>• No hot water or chemical knife sanitizers</li> <li>• No pre-operation check done</li> </ul>	<ul style="list-style-type: none"> <li>• Hot and cold water hand wash stations with soap and single use towels</li> <li>• Knife sanitizers set up and functioning correctly</li> <li>• Pre-operation inspection done</li> </ul>
Meat is protected from contamination by pests, chemicals or unsanitary conditions	<ul style="list-style-type: none"> <li>• No plans for pest control or sanitation</li> <li>• Unclean surroundings (e.g., dirt, dust, clutter, manure, etc.)</li> <li>• Chemicals are inadequately stored</li> <li>• Cleaning not scheduled appropriately</li> </ul>	<ul style="list-style-type: none"> <li>• Written cleaning and pest control plan</li> <li>• Use of bleach or other adequate sanitizers for equipment</li> <li>• Area is clean, uncluttered</li> <li>• Chemicals stored appropriately</li> <li>• Cleaning scheduled for before and after slaughter</li> </ul>

### Water Supply at Slaughter

A clean, safe supply of water is important to ensure that activities such as handwashing, carcass washing, equipment cleaning and facility cleaning can be done without the risk of contamination. Both hot and cold water should be available. Hot water is more effective at removing grease, fat, and oil than cold water. The facility must have potable water that is adequate in temperature, quantity and pressure to meet operational needs.

Water must be tested by the designated provincial authority on a regular basis and prior to the slaughter season to ensure that it meets the potability standards. The BC Meat Inspection Regulation requires that water used during the slaughter process must be potable.

Water may be obtained from a variety of sources, including municipal water systems, private groundwater sources, and private surface water sources. Private water sources should be adequately set back from potential sources of contamination such as septic systems, livestock pens, and chemical or fuel storage areas.

In some cases, the water source will meet the potability requirement without any further treatment. In other cases, some form of water treatment device may be required to meet the standard. Water treatment equipment used should be suitable for use in a potable water supply system and should be installed in accordance with the manufacturer's directions.

Hoses used during slaughter and clean-up should be of potable water quality and equipped with a back-flow preventer to prevent contamination of the water source. Ice must be made from potable water and it must be stored in clean, sanitary, potable containers. If ice is purchased, it should be from an approved source that uses potable water.

#### Use of Non-Potable Water

1. Non-potable water must only be used for fire prevention or condensers used to heat boilers or in refrigeration systems.
2. There must not be any connection between the non-potable water system and potable water system.
3. Non-potable lines must be clearly and distinctly identified.
4. Non-potable water must not be used where edible products are processed, handled or stored.

### Potable Water

Element	Unacceptable	Acceptable
Only potable water is used during slaughter, dressing, and for cleaning work sites	<ul style="list-style-type: none"> <li>• No running water available.</li> <li>• Using a pail of water</li> <li>• Non-potable water used</li> </ul>	<ul style="list-style-type: none"> <li>• Running water available</li> <li>• Satisfactory bacteriological test results</li> </ul>

**COMPLETE ACTIVITY 1.1.2**

### 1.1.3 Hygiene Practices

Hygiene is a set of practices that prevent the spread of disease-causing organisms. It is not the same as cleanliness, though cleanliness supports good hygiene. Slaughter and meat-handling hygiene, personal hygiene and pest control are all important aspects of hygiene.

An attitude and commitment to cleanliness, clean hands, clothing and good hygienic practices are essential to the production of high-quality meat.

#### Personal Hygiene

Personal hygiene during slaughter involves caring for one's own health and well-being, through cleanliness. It's not just about keeping the meat safe, but also about keeping you safe from bacterial infections and zoonotic diseases. Zoonotic diseases are spread between animals and humans by fungi, bacteria, parasites, and viruses. Examples include avian influenza, erysipelas and rabies.

Not only is it important to start the day with clean clothing, but throughout the slaughter process steps need to be taken to keep the carcass from contamination. Clothing should be changed when moving between 'dirty' areas (e.g. animal holding, stunning and scalding areas) and 'clean' areas (e.g. evisceration and chilling) to prevent transferring contamination to clean carcasses.

On the kill floor, it is best to wear clothing that can be easily rinsed off such as a plastic apron and rubber boots. You can ruin all your hard work by brushing up against a clean carcass in soiled clothing.

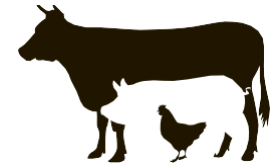
#### PERSONAL HYGIENE IS VERY IMPORTANT

<p><b>Change your clothing whenever you leave the kill floor:</b></p> <ul style="list-style-type: none"> <li>• Moving the next animal</li> <li>• Going to the bathroom</li> <li>• Going on break or lunch</li> <li>• Have 'outside' clothing hanging nearby.</li> </ul>	<p><b>Before re-entering the kill floor:</b></p> <ul style="list-style-type: none"> <li>• Clean and sanitize boots – this is best done with a boot scrubber, a hose and a foot bath filled with sanitizer</li> <li>• Put on 'inside' smock or other covering</li> <li>• Wash and sanitize hands</li> </ul>
<p><b>You should sanitize your hands after you:</b></p> <ul style="list-style-type: none"> <li>• Touch your cell phone</li> <li>• Pick something up from an unclean surface</li> <li>• Before touching edible product if touched an unsanitized item</li> <li>• If they become heavily soiled</li> </ul> <p><i>This includes gloves if used</i></p>	<p><b>On-going:</b></p> <ul style="list-style-type: none"> <li>• Throughout the process, keep your clothing clean</li> <li>• If clothing gets heavily soiled, put on fresh clothing</li> <li>• Wash hands as often as possible</li> </ul>

#### Hand Washing

Pathogens are frequently transferred from place to place by human hands. It is important that workers wash their hands properly and frequently to prevent the contamination of food and food contact surfaces.

## HAND WASHING



### Before starting, remove all jewellery

1. Wet hands with warm water.
2. Apply liquid soap.
3. Rub hands together away from running water vigorously for at least 20 seconds to create lather.
  - Wash and scrub the front and back of your hands, between the fingers and under your nails.
4. Rinse with warm running water for 15 seconds using a rubbing motion.
5. Dry hands thoroughly with paper towels.
6. Turn off taps with paper towels.
7. Put used paper towels in garbage can.

### Hygiene Practices

Element	Unacceptable	Acceptable
People involved in slaughter have the knowledge and training to prevent contamination of meat	<ul style="list-style-type: none"> <li>• Untrained</li> <li>• Minimal knowledge or skills apparent</li> </ul>	<ul style="list-style-type: none"> <li>• SlaughterRight certified or supervised by a</li> <li>• SlaughterRight trained person</li> </ul>
People with health or hygiene issues that may affect meat safety do not participate in slaughter processes	<ul style="list-style-type: none"> <li>• Smoking</li> <li>• Loose hair</li> <li>• Open wounds or infections</li> <li>• Eating or drinking</li> <li>• Impaired by alcohol or drug.</li> <li>• Acute illness, including diarrhea, fever or rash</li> </ul>	<ul style="list-style-type: none"> <li>• Wounds are satisfactorily covered</li> <li>• People are healthy</li> <li>• People are alert</li> </ul>

### COMPLETE ACTIVITY 1.1.3

## 1.1.4 Biological, Chemical and Physical Hazards

Food safety hazards in animal processing come from three sources that must be controlled to ensure meat fit for human consumption is produced. By preventing food safety hazards, you reduce the likelihood of foodborne illness and protect your business and reputation.

### Biological Hazards

Bacteria, viruses, or parasites that could cause foodborne illness.

Watch out for:

- Workers with poor hygiene or food handling techniques.
- Bacteria commonly found in meat.
- Storing meat at a temperature that allows bacteria to grow.

Protect your meat by:

- Storing and preparing meat at proper temperatures.
- Practicing good hygiene in your facility.

### Chemical Hazards

Anything that could introduce an unwanted chemical into your meat.

Watch out for:

- Meat in contact with cleaning chemicals or pesticides.
- Unintentional contact with common food allergens, such as peanuts or seafood.

Protect your meat by:

- Labeling and storing chemicals separately from meat.
- Removing meat from the area prior to cleaning and sanitizing.
- Using correct cleaning and preparation procedures.

### Physical Hazards

Dangerous materials that could end up in your meat unintentionally.

Watch out for:

- Personal objects such as jewellery that can fall into the meat.
- Materials that do not belong in meat, such as wood splinters, thorns and broken needles.

Protect your meat by:

- Conducting regular visual inspections.
- Following good slaughter practices in your facility.

## COMPLETE ACTIVITY 1.1.4

### 1.1.5 Cross Contamination

Cross contamination is the transfer of bacteria or other contaminants from one surface or substance to another because of unsanitary handling procedures. The table below provides examples of sources of cross contamination during slaughter.

Common contact surfaces are often overlooked. These are surfaces that are not surfaces that come into direct contact with meat but places with which knives, saws, tools or hands may come into contact – such as a side table or wall. All such surfaces should be cleaned and sanitized to reduce the potential of cross contamination.

<p><b>From the animal to its carcass</b></p> <ul style="list-style-type: none"> <li>• Ingesta</li> <li>• Feces</li> <li>• Hair/feathers</li> <li>• Bodily fluids</li> <li>• Dirt on the hide</li> </ul>	<p><b>From one animal to another</b></p> <ul style="list-style-type: none"> <li>• Equipment not cleaned between animals</li> <li>• Slaughter area not cleaned between animals</li> <li>• Overspray from one carcass onto another while washing</li> </ul>
<p><b>From equipment to the animal</b></p> <ul style="list-style-type: none"> <li>• Dirty and unsanitized knives, saws, hooks, hoists, rails, gambrels</li> <li>• Dirty and unsanitized tubs, pails, bins</li> <li>• Dirty and unsanitized packing boxes, wrap, tarps</li> <li>• Leaking hydraulic hoses</li> </ul>	<p><b>From the environment to the animal</b></p> <ul style="list-style-type: none"> <li>• Water that is not potable</li> <li>• Airborne dirt and debris</li> <li>• Flying insects, birds</li> <li>• Rodents</li> <li>• Dogs and other animals</li> </ul>
<p><b>From the animal to the worker</b></p> <ul style="list-style-type: none"> <li>• Zoonotic diseases</li> <li>• Bacterial infections – E. coli, Salmonella, etc.</li> </ul>	<p><b>From the worker to the animal</b></p> <ul style="list-style-type: none"> <li>• Dirty and unsanitized hands</li> <li>• Open cuts</li> <li>• Dirty and unsanitized smocks, aprons</li> <li>• Human hair</li> <li>• Contagious disease</li> </ul>

**COMPLETE ACTIVITY 1.1.5**

### 1.1.6 Meat Storage

Meat must be stored in a way that minimizes the potential for contamination and growth of organisms that can cause food poisoning. Refrigeration equipment must be capable of chilling the carcass to 4°C and maintain this temperature while carcasses are being stored. Proper air circulation will assist in keeping carcasses dry, which will help prevent the growth of microorganisms.

It is highly recommended that a cooler is available on site, however Farmgate and Farmgate Plus licences do not require on-site coolers provided off-site refrigeration is within a 30-minute drive. Otherwise, the shelf-life of meat is reduced to days or hours, not weeks.

#### Off-Site Cooler

Off-site refrigeration must be located close enough that hot carcasses can be delivered within 30 minutes.

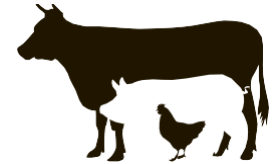


If travel to the off-site refrigeration exceeds 30 minutes, then a mobile refrigeration unit should be used to provide cooling during transportation. In the case of smaller carcasses, such as pigs, goats, or lambs, carcass cavities may be filled with ice to begin the cooling process during transportation.

Under certain conditions it may be acceptable to extend the travel distance to off-site refrigeration such as when slaughtering is done in the late fall or winter and temperatures are cooler. The travel time to refrigeration facilities should never exceed 60 minutes.

The transport must be clean and sanitary, and the carcasses must be protected from contamination during travel. The off-site cooler must also be clean and sanitary. Please identify travel times and location of off-site coolers when developing your food safety plan.

### ON-SITE COOLERS



**Carcasses must be placed in the cooler immediately after dressing.**

- The cooler must be adequately sized for its intended use.
- Meat products must be stored off the floor.
- The compressor and condenser must be adequately sized for the load.
- Drain lines for the condenser should drain outside to avoid introducing excess moisture.
- The cooler should provide adequate ventilation and air flow.

### Storage and Transport of Meat

Element	Unacceptable	Acceptable
Contamination and spoilage of meat is prevented through adequate storage and transport	<p><b>Cooler Conditions</b></p> <ul style="list-style-type: none"> <li>• Crowded and poor air flow</li> <li>• Cooler surfaces are dirty</li> <li>• Cooler unable to maintain consistent temperature of 4°C (40°F)</li> </ul> <p><b>Non-Cooler Conditions</b></p> <ul style="list-style-type: none"> <li>• Ambient temperature at time of storage is greater than 4°C</li> <li>• Meat is stored uncovered and/ or unprotected</li> </ul>	<p><b>Cooler Conditions</b></p> <ul style="list-style-type: none"> <li>• Cooler size is sufficient for capacity (e.g., for beef, carcasses not touching and air around them)</li> <li>• Cooler surfaces are clean</li> <li>• Cooler capacity is appropriate in relation to number of carcasses</li> </ul> <p><b>Non-Cooler Conditions</b></p> <ul style="list-style-type: none"> <li>• Sufficient for maintaining carcasses at less than 4°C</li> <li>• Time between slaughter and delivery is minimized</li> <li>• Meat is covered and protected</li> </ul>

**COMPLETE ACTIVITY 1.1.6**

### **1.1.7 Keeping Track**

Ability to determine the origin of food is an essential public health safeguard in the event of a food-borne illness incident. The ability to trace meat and meat products to their farm of origin is critical. Food labeling and maintaining accurate sales records provide the primary means of traceability.

#### **Labeling**

Farmgate and Farmgate Plus licence holders are required to label all meat and meat products (which must be processed at a licensed processing establishment). They must also keep records related to slaughter activities occurring on their farm and under their licence.

The Meat Inspection Regulation states that Farmgate and Farmgate Plus licence holders must label all raw meat/carcasses or packages containing meat products originating from their farm with the following information:

- The name and address of the farm or facility.
- A description of the contents, including the date product was packaged.
- The net weight or volume.

Packaged meat products from animals slaughtered at a Farmgate licensed establishment must be labelled with the following:

- Your Premises ID number.
- "Not Government Inspected; For sale only in the regional district of [name of regional district in which the farmgate slaughter establishment is located], or at a temporary food market within 50 km of the slaughter establishment. Not for resale".

Packaged meat products from animals slaughtered at a Farmgate Plus licensed establishment must be labelled with the following:

- Your Premises ID number.
- "Not government inspected."

#### **Record Keeping**

Accurate record keeping is critical to ensuring licence holders can keep track of the animals being slaughtered, the volume of meat being produced, where meat is sold and who is purchasing it. You are responsible for understanding and meeting all record-keeping requirements as part of your licence obligations. Record examples are provided in the Writing the Food Safety Plan section.

#### **Sales Records**

These records are critical for ensuring customers can be easily contacted in the case of a product recall. Copies of all invoices should also be kept to verify information in the sales record. Critical information to record includes:

- Type of product.
- Date of sale.
- Quantity sold (by weight).
- Customer name and contact information.

#### **Pre-Operation Inspection Record**

Licence holders must keep a record of pre-operation inspection to confirm that the animal holding and handling areas, the slaughter area and all equipment is clean and ready for the processing day.

## **Processing Record**

Licence holders must keep a record of the animals processed. The information should include type of animal, distinguishing marks, RFID tag numbers if present, the animal's farm of origin and the cut-and-wrap destination (if applicable). Licence holders processing their own animals must be able to demonstrate ownership of all animals slaughtered at their establishment. This may be a bill of sale (e.g., if the animal was purchased at auction), a birth record (if the animal was born on the farm), or other records clearly showing that the animal was raised on the farm.

## **Ante-Mortem Inspection Record**

Licence holders must keep an animal health assessment check, or ante-mortem (pre-slaughter) assessment card, for each animal processed.

## **Temperature, Calibration, Maintenance and Complaint Logs**

- Records should be kept to confirm temperatures of products, coolers and freezers.
- For verification, a log should be kept showing thermometer, scale and other equipment calibration.
- For your own records, repairs and maintenance on equipment, coolers and freezers should be tracked.
- A detailed log of all customer complaints should be kept. This includes contact information, a brief description of the complaint, and actions taken to address the complaint.

## **Specified Risk Materials (SRM) Records**

Farmgate and Farmgate Plus licence holders that plan to slaughter cattle must follow all appropriate federal laws related to specified risk materials (SRMs). This includes record keeping, handling, transporting and disposal requirements.

The local Animal Health Office of the Canadian Food Inspection Agency (CFIA) must be contacted to ensure you comply with current regulations.

See section 1.2.18 for detailed SRM information.

## **Review of Slaughter Records**

Licence holders are responsible for understanding and meeting all record-keeping obligations under their Farmgate or Farmgate Plus licence. During a follow-up site assessment, all required records will be reviewed. If the records are inaccurate or incomplete, corrective actions must be undertaken as directed.

## **Product Recall Plan**

If an investigation determines the need to recall meat or meat products produced at your farm or slaughter site, the following steps will be followed:

1. The BC Meat Inspection Program will notify you, the licence holder about the recall.
2. You must contact all consumers who have purchased potentially contaminated product from your facility.
3. You must document all efforts taken to contact consumers, including dates.
4. You must submit the results of your recall to the BC Meat Inspection Program.

If you receive a report of illness from one of your customers directly, you must immediately inform the BC Meat Inspection Program and follow their instructions.

### **Traceability requirements under the Safe Food for Canadians Regulations**

As a Farmgate or Farmgate Plus licence holder, you are required to keep and maintain food traceability records under the [Safe Food for Canadians Regulations](#).

Traceability documents will allow you to identify from where you sourced the food and/ or food commodity (one step back), and to whom you provided the food (one step forward). Preparing, keeping, and retaining traceability documents will allow you to accurately identify the scope of a recall, and thereby ensure that consumers are protected against risk of injury to their health.

For more information please visit: <https://www.inspection.gc.ca/food-safety-for-industry/traceability/traceability/eng/1522294721005/1522294781171>

Or contact your local Canadian Food Inspection Agency Office.

<https://www.inspection.gc.ca/about-cfia/offices/eng/1313255382836/1313256130232>

### **COMPLETE ACTIVITY 1.1.7**

### 1.1.8 Other Applicable Requirements

There are many regulations and requirements that apply to Farmgate and Farmgate Plus licences beyond the BC Meat Inspection Regulation. Other requirements that may be relevant to your operation include but are not limited to:

#### Organizational Oversight

Organization	Oversight
Ministry of Agriculture, Food and Fisheries, BC Meat Inspection Program	Licensing, inspection, records, Codes of Practice for facilities and operations
Canadian Food Inspection Agency (CFIA)	Safe Food for Canadians Regulation, labeling, traceability, animal welfare, animal transport and movement reporting, SRM removal, transport and disposal, inter-provincial sales of meat plus others
Ministry of Environment and Climate Change Strategy	Disposal of liquid and solid waste at abattoirs as well as permits to bury SRM on your property
Canadian Cattle Identification Agency (CCIA)	Canadian Livestock Tracking System (CLTS), cattle, sheep, bison, goat and cervid tag retirement and movement reporting
PigTrace	Pig tag retirement and movement reporting
Canadian Beef Cattle Check-Off Agency	Levy for inter-provincial and export sales and slaughter of beef cattle
Cattle Industry Development Council (BC)	Horn levy and the provincial check-off levy for sales and slaughter of beef cattle
BC Sheep Federation	RFID ear tags
BC Bison Association/Canadian Bison Association	RFID ear tags
Agriculture Land Commission	Use of agriculture land and issue of non-farm use permits
BC Chicken Marketing Board	Broiler bird quota, reporting requirements and slaughter licence fee
BC Turkey Marketing Board	Turkey quota, reporting requirements and slaughter licence fee
Ownership Identification Inc.	In prescribed areas of the province: cattle ownerships verification (brand inspection), livestock form (Form 3) for live cattle shipments as well as at slaughter and shipment of beef carcasses
BC Health Authorities	Further meat processing (cut and wrap facilities), sewage

#### COMPLETE ACTIVITY 1.1.8

## 1.2 Slaughter Hygiene

Slaughter hygiene refers to best practices while processing animals to reduce food safety risks. Refer to Food Safety Section 1 for the good slaughter practices overview.

Three key criteria for maintaining hygienic conditions at slaughter are:

- Eliminate the risk of bacterial infection and food poisoning via the meat.
- Prevent spoilage and enhance the keeping quality and safety of meat.
- Produce meat of good eating quality, appearance and aesthetic value through proper handling.

### 1.2.1 Slaughter Day Preparation

Having the site clean, sanitized and ready to start is important to ensure the processing day goes as smoothly as possible.

#### Site Set-up and Administration

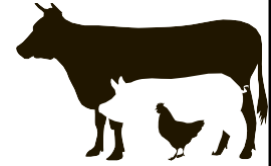
- The slaughter site should be well-organized and free of other animals like pets or pests.
- Water used must be potable. If a water treatment system is needed, it must be checked as well as the hot water tank or on-demand hot water system.
- Handwashing stations must set up with hot and cold running water, paper towels, soap and garbage can. Hands must be washed frequently during slaughter.
- All clothing, including smocks, aprons, boots, hair-coverings and gloves need to be clean
- Before the start of the day, all knives, scabbards, steels, tools, hooks, hose nozzles, gambrels, walls, floors, tables, other food contact surfaces and common contact surfaces should be cleaned and sanitized.
- Bins for waste collection should be clean and placed in appropriate locations.
- Any coolers, freezers or chill tanks need to be checked for cleanliness correct temperature.
- Hoisting equipment should be clean and functional.
- All the necessary paperwork, including the slaughter log and the pre-operation check, should be printed. Any paperwork for additional record keeping such as marketing board information, ear tag recording for retirement, ownership identification, SRM logs, shipping paperwork, should be available
- All knives should be sharpened, thermometers calibrated, and the equipment set up and located appropriately prior to the start of operations. This includes scales and labelers.

#### Animals

- Animals to be slaughtered must be separated from other animals not being slaughtered.
- Holding areas, pens, crates must be in good repair and the stunning area made ready to receive animals. Animals must have water to drink from.
- Farmgate Plus establishments processing other people's animals need to ensure the receiving area is clean and ready, and the transporter has all the necessary paperwork.
- Ante-mortem inspection must be done to ensure animals are fit and healthy and to identify any potential issues at slaughter.
- Stunning equipment must be clean, operational and readied for use. This includes sharp knives if using rapid decapitation on poultry, bullets for live fire and charges for captive bolt guns.
- The landing site after stunning lamb/sheep, pigs, goats and cattle must be clean.

## Site Preparation Checklist

Correct setup of your slaughter area will help with efficiency, support humane treatment of animals, and reduce food safety risks. A Pre-Operation Checklist is a convenient tool for ensuring proper set-up.



### COMPLETE ACTIVITY 1.2.1

## 1.2.2 Knife and Equipment Sanitation

Knives and other invasive tools (e.g. saws) pick up bacteria and other contaminants during slaughter and must be cleaned and sanitized on a regular basis. Sterilizers will not work correctly if the knives and tools are not cleaned and free of debris. Failure to sterilize all knives and evasive tools) regularly can result in carcass contamination.

### What you need to do to clean and sanitize invasive tools

- Remove visible debris.
- Rinse with potable water.
- Immerse tools in sanitizing solution of either hot water (82°C) or chemical sanitizer for at least 15 seconds. Having at least two knives will allow for the proper time in the sanitizer without interrupting workflow.
  - If using an electric knife (e.g. for poultry stunning and bleeding) unplug before cleaning.

### When you need to clean and sanitize knives and tools

- When they become heavily soiled.
- Every time they come into contact with the outer hide – opening cuts and slips while skinning.
- Between different red meat animals or between different batches of birds/rabbits.
- If the viscera, mammary glands, testes or gall bladder are punctured.
- If an abscess or other growth is punctured.
- If the knife or tool gets dropped on the ground.
- If the knife or tool is placed on an unsanitized surface.

Dedicated, identifiable knives and tools are required as per CFIA's SRM policy when removing SRM material from beef animals. Please go to [www.inspection.gc.ca/food-safety-for-industry/food-specific-requirements-and-guidance/meat-products-and-food-animals/srm/eng/1369768468665/1369768518427#a3](http://www.inspection.gc.ca/food-safety-for-industry/food-specific-requirements-and-guidance/meat-products-and-food-animals/srm/eng/1369768468665/1369768518427#a3)

### COMPLETE ACTIVITY 1.2.2

### **1.2.3 Animal Welfare and Humane Handling - Impact on Food Safety**

The welfare and humane treatment of food animals affects both food safety and meat quality. Prior to slaughter, animals must be healthy and must be handled in a way that minimizes stress.

#### **Stress and Food Safety**

When an animal has been exposed to stress, their bodies react which can result in meat with a higher pH or greater water holding capacity depending on whether the stress is long term or short term. Both conditions provide a good growth environment for bacteria. In addition, stressed animals can shed enteric pathogens such as E. coli.

#### **Bruising, Fractures and Food Safety**

Nervous and highly excited animals are more likely to run, slip, fall or collide with gates, doors or other animals. This can happen due to handling just prior to slaughter when moving the animals to the pens, chutes and stun boxes.

Bruises are an accumulation of blood and must be trimmed from meat since blood is an ideal growth medium for bacteria. Likewise, broken bones and associated damaged tissue must be removed from meat destined for human consumption.

#### **Cleanliness and Food Safety**

In addition to stress, the cleanliness of the animal is important for food safety at slaughter since it increases the risk that a carcass could be contaminated with dirt and fecal matter. All pens and poultry crates must be kept clean and dry.

#### **Feed Withdrawal and Food Safety**

Fasting of the animal before slaughter reduces the volume of gut contents and hence bacteria and therefore reduces the risk of contamination of the carcass during dressing. It is usually sufficient for the animals to receive their last feed 24 hours before slaughter.

**COMPLETE ACTIVITY 1.2.3**



## 1.2.4 Ante-Mortem Inspection

The general health of the animal affects food safety and meat quality. Examining the animal prior to slaughter is important. Some of the major objectives are:

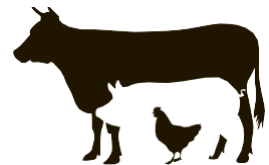
- Identify animals showing clear evidence of disease or condition that could render the meat unfit for human consumption.
- Identify animals that could pose a threat to the health of people handling the carcass. Zoonotic diseases, such as ringworm and diamond skin disease, are examples of diseases transmitted from animals to humans.
- Identify animals that are suspected of having been recently treated with antibiotics or other chemicals.
- When diseased animals are found in a herd/flock the rest of the herd/flock could be affected by the same disease (e.g. respiratory disease in swine or porcine epidemic diarrhea).
- Identify heavily contaminated animals that could lead to problems during dressing procedures
- Identify animals that may show signs of a foreign animal disease or other reportable disease. If you suspect that an animal has a reportable disease such as Bovine Tuberculosis, Foot and Mouth Disease, Avian Influenza or African Swine Fever contact your local CFIA District Office immediately.
- Make a disposition regarding the suitability of animals for slaughter so that dead or dying animals do not enter the slaughter floor.
- Identify animals requiring special handling for humane reasons (e.g. animals with fractures).

Ante-mortem inspection should be carried out with adequate lighting where animals can be observed in motion and from all sides. The general behaviour of animals should be observed, as well as their nutritional status, cleanliness, signs of diseases and abnormalities.

1. The animals should be observed at rest and in motion
2. Both sides, the head and rear of each animal, should be examined
3. In-pen screening should take into account the requirements for observation while maintaining safety considerations
4. For poultry, the general health of the flock and any individual birds that stand out as different should be noted. Each bird is handled at stunning so abnormalities can be noted at that time

### **How to do Ante-Mortem Inspection**

Develop a standardized approach for your examination so that all animals are observed completely and in a consistent manner. Observe the animals for as long as necessary and develop protocols for handling problems if identified.



**Signs to look for:**

Abnormality	Indicators
<p><b>Abnormal breathing</b> If the breathing pattern differs from normal, the animal should be screened out.</p>	<ul style="list-style-type: none"> <li>• Frequency of breathing.</li> <li>• Frequent coughing.</li> <li>• Difficulty in breathing.</li> <li>• Shallow and painful breathing.</li> </ul>
<p><b>Abnormal behaviour</b> Abnormal behaviour can be significant in some very serious diseases such as rabies and lead poisoning.</p>	<ul style="list-style-type: none"> <li>• Animal pushing its head against the wall.</li> <li>• Animal walking in circles.</li> <li>• Animal charging at various objects.</li> <li>• Animal with an anxious expression in its eyes.</li> <li>• Animal with a dull expression in its eyes.</li> <li>• Animal acting very aggressively.</li> </ul>
<p><b>Abnormal gait</b> The animal may be suffering from abnormalities anywhere in its legs or may have pain in the chest or abdomen. It may also have a nervous disorder.</p>	<ul style="list-style-type: none"> <li>• The animal staggers.</li> <li>• The animal is limping.</li> <li>• The animal is reluctant to move.</li> </ul>
<p><b>Abnormal posture</b> An animal with abnormal posture may:</p>	<ul style="list-style-type: none"> <li>• Stand with its abdomen tucked in.</li> <li>• Lie with its head turned and along its side.</li> <li>• Stand with its feet stretched out in front.</li> <li>• Stand with its head and neck extended.</li> <li>• Be unable to rise (downer).</li> </ul>
<p><b>Abnormal discharges or extrusions from body openings</b> The normal animal has no discharges or protrusions from its body openings.</p>	<ul style="list-style-type: none"> <li>• Discharge from the nose.</li> <li>• Bloody diarrhea.</li> <li>• Excessive saliva coming out of the mouth.</li> <li>• Afterbirth hanging out of the vulva.</li> <li>• Calf leg protruding from vulva.</li> <li>• Intestine protruding from rectum.</li> <li>• Uterus protruding from vulva.</li> <li>• Growth protruding from eye.</li> </ul>
<p><b>Abnormal colour</b> Abnormal colour is generally not as important as other abnormalities; however, you should look out for this.</p>	<ul style="list-style-type: none"> <li>• Black areas on the skin (of swine).</li> <li>• Red areas in light-coloured skin (inflammation).</li> <li>• Dark-blue areas (e.g., gangrenous udder).</li> <li>• Yellow colouration of the white part of the eye or skin (jaundice).</li> </ul>
<p><b>Abnormal appearance</b> Whenever there is a change in the normal appearance of an animal, a disease process should be suspected.</p>	<ul style="list-style-type: none"> <li>• Swelling of the skin (abscesses).</li> <li>• Enlarged joints.</li> <li>• Swelling of the umbilicus.</li> <li>• Udder greatly enlarged.</li> <li>• Abdomen bloated.</li> <li>• Swollen legs.</li> <li>• Enlarged jaws (“lumpy jaw”).</li> <li>• Hanging down (pendulous) lower abdomen.</li> <li>• Swelling of subcutaneous lymph nodes.</li> </ul>
<p><b>Abnormal odour</b> This is often difficult to detect on pre-slaughter assessment.</p>	<ul style="list-style-type: none"> <li>• Stinkweed.</li> <li>• Medicinal odour.</li> <li>• Punctured abscess odours.</li> </ul>

### **What to do when you see something wrong with the live animal**

A decision to euthanize, provide vet care, or slaughter should be made immediately. Animals with extensive bruising or fractures may require emergency slaughter. Animals showing clinical signs of disease should be held for veterinary examination and segregated from healthy animals.

If there is any doubt regarding the suspected cause of an animal's poor health, you should phone a local veterinary care practitioner or the Ministry of Agriculture, Food and Fisheries' Animal Health Centre.

The mandate of the Animal Health Centre is to diagnose, monitor and assist in controlling and preventing animal disease in British Columbia. The Centre does not determine suitability of meat for human consumption.

**Address:**

Animal Health Centre,  
1767 Angus Campbell Rd,  
Abbotsford, BC V3G 2M3

**Phone:**

(604) 556-3010 or 1-800-661-9903

**Email:**

PAHB@gov.bc.ca

**COMPLETE ACTIVITY 1.2.4**

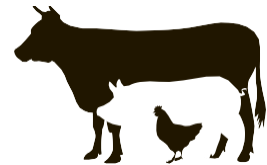
## 1.2.5 Stunning

Stunning brings an animal to a state of insensibility which must last until the animal is bled out. Stunning is required to minimize the animal's pain and stress, and to immobilize the animal to allow sticking (for bleeding) to be performed accurately.

- When using a firearm for stunning, the head and neck area must be checked to ensure the bullet has not come apart and become embedded in meat to be harvested.
  - If firearms are used for stunning, the licence holder must have a written Firearm Use - Standard Operating Procedure that outlines the process for using the firearm and the controls to ensure the safety of people, the safety of other animals around the stunning area, and the food safety of resulting meat products.
- If a captive bolt gun is used, it must be thoroughly cleaned between use on different species.
  - If used on cattle over thirty months of age (OTM), the bolt collects skull and brain material which must be treated as Specified Risk Material (SRM). The bolt must be properly cleaned. Waste material must be disposed properly.
- With an OTM beef animal, there is the possibility of spilled SRM brain matter. Best practice is to plug the hole after stunning with either a foam earplug or food grade grease.
- If stunning is not done correctly the first time, the animal must be immediately re-stunned.
  - If improperly stunned, the animal may undergo stress that can adversely impact the meat.

### The stunning area should:

- Be in a contained/confined area to increase the chances of a successful stun;
- Be free of distractions and stressors such as other animals and noises;
- Be close to the bleeding area to minimize time between stunning and sticking, and
- Have a clean, debris-free landing site to prevent mud and debris contaminating the hide.



### Poultry

If no stun is done on poultry prior to bleeding, birds should be placed in appropriately sized cones to reduce damage to the carcass from wing flapping.

Birds that are placed in cones that are too big can fall through and into the blood collection area. This adds unnecessary contamination to the feathers which is transferred to the scalding and plucker.



## COMPLETE ACTIVITY 1.2.5

## 1.2.6 Sticking and Bleeding

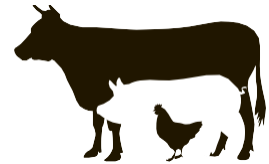
The objectives of sticking and bleeding are to kill the animal with a clean incision while doing minimal damage to the carcass since the sticking area must be trimmed during dressing. Animals should be bled as soon as possible after stunning, ideally during the tonic phase. At this stage the body is rigid, making sticking easier and safer. It is important to quickly remove as much blood as possible since blood is an ideal medium for the growth of bacteria.

When sticking, care must be taken not to puncture the chest cavity as it can fill with blood. If the esophagus is pierced, semi-digested food may be released contaminating the hide and neck wound.

### Preparation

The following are needed to ensure a clean, sanitary bleed-out:

- Two or more sharp knives
- Running potable water
- Knife sanitizer
- Hand wash area
- Clean, debris-free landing area
- Waste blood collection bin
- Appropriate clothing



### Bleeding Red Meat Species

- It is acceptable to stun and bleed the animal in the field. Bleeding off the ground is preferable; however, if the animal is to be bled on the ground, a clean location must be selected that is well drained and located away from potential sources of contamination such as manure or waste from a previous slaughter.
  - If pigs are bled on the ground, they must be washed before skinning or scalding.
- After animals have been bled out and moved to the dressing area, they must be:
  - elevated to prevent contact with the ground or contamination from splashing, and
  - protected from contamination including from the transferring equipment (e.g. tractor).
- Blood should be contained in a plastic pail or other suitable container.
- The sticking knife must be rinsed and sanitized after use on each red meat animal. The knife should be sanitized between batches of birds or when it becomes heavily soiled.
  - Cutting open the hide of sheep and cattle with one knife then opening the hide out to make a clean entry for the second knife reduces contamination.

### Bleeding Poultry

Rapid decapitation is an acceptable practice for poultry. When doing rapid decapitation, a sharp, clean knife should be used to cut across the front of the neck just below the head. If the cut is too high, there is the possibility of missing the jugular vein and the brain stem.

### COMPLETE ACTIVITY 1.2.6

## 1.2.7 Skinning Red Meat Species

During the skinning process, contamination of the carcass can occur from several different sources. It is important to follow good slaughter practices, knife sanitation and personal hygiene.

### Sources of contamination:

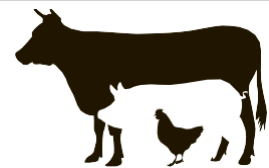
- Feces – if the intestine is punctured or the bung is not tied off on cattle and bison.
- Ingesta – if the animal has not had food withdrawn or the esophagus is not tied off on cattle and bison.
- Dirty hide -on very dirty animals it is best to shear the hair along the opening cut line first.
- Milk – when udders are removed, particularly in older cows.
- Urine – if the bladder is full or punctured on cattle/bison when opening the pelvic bone.
- Worker clothing, dirty knives, dirty hands, contact with an unsanitary surface.

### Skinning Method:

- Cradle and hoisted skinning are more hygienic than skinning on the ground or on a table.
- Except for starting cuts, the skin must be cut from inside out and deflected away from the carcass to prevent contamination with hair, dirt and manure.
- Keep the knife edge up so that:
  1. the sharp edge will not cut into the meat or the viscera, and
  2. the underside of the knife remains clean provided it does not touch the outside of the hide (important to pull the hide back when skinning).
- Any contaminated area on the carcass or its parts must be trimmed. Washing is not sufficient for the removal of visible contamination.
  - Washing contamination risks spreading it over more surface area.
- Over-wetting the carcass can cause cooler condensation and provide a better growth environment for bacteria
- Do not allow the carcass to touch or be touched by anything that has not been cleaned and sanitized.
  - When the carcass is moved to and from the skinning bed, the exposed parts must not contact the floor, cradle or other fixed objects.
- Clothes worn outside the kill area should be changed or covered before skinning.
- Before the hide of a pig is removed, the carcass must be washed.

### Throughout the red meat skinning process:

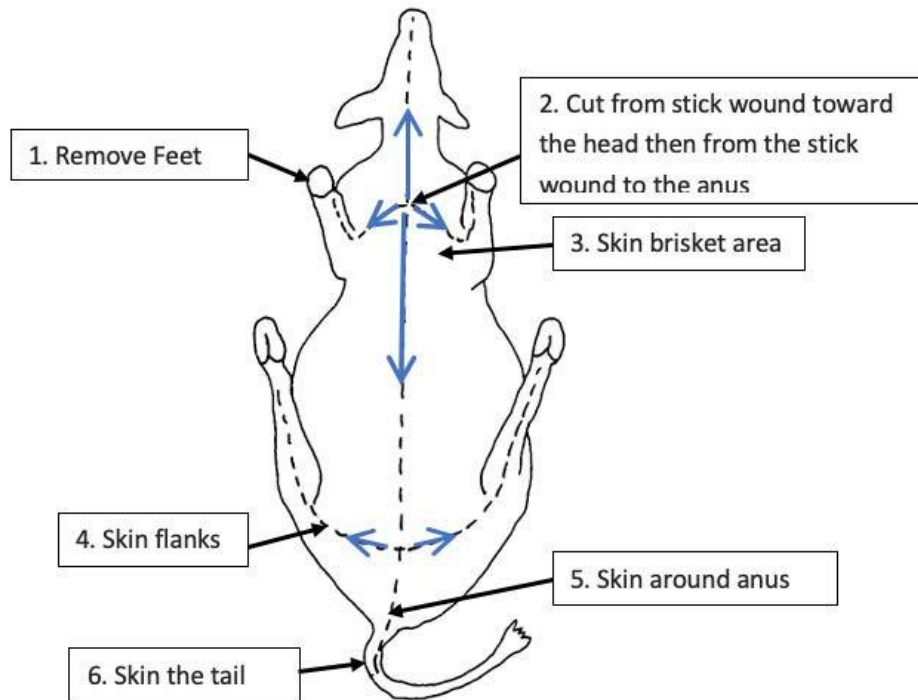
- All gams and hooks must be sanitized before use.
- Hook ends, saws and knives must be sanitized as needed.
- Keep hands and knife clean.
- Wash hands often.
- Every time your knife comes into contact with contamination, clean and sanitize it.
- Trim all contamination from carcass (hair, ingesta, feces, milk, urine, dirt).
- Don't touch the carcass with your dirty hands.



## Trim as you go

### During the Skinning Process

- After taking the head off, make sure the exposed surface does not come into contact with the ground.
  - The head can be left on skinned pigs, but the heads must also be skinned.
- If the beef animal is OTM, a dedicated knife must be used to remove the head (see SRM procedures).
- Beef and bison must have their esophagus tied to prevent ingesta from contaminating the carcass.
- Pigs, sheep, lamb, goats and rabbits must have their esophagus tied off if:
  - the esophagus is punctured, or
  - the animal has recently been fed.
- When removing feet, the area above and below should be skinned first.
  - This reduces the risk of the area being contaminated.
  - Skinned pigs should have their feet removed since they are difficult to make food-safe unless scalded.
- Make opening cuts starting at the stick wound since this is already an opening in the hide.
  - With the knife edge up, make cuts towards the head then towards the hind end.
  - When making opening cuts across the brisket (chest), as well towards the hind legs, start from the center line and work outwards.
  - If the animal is heavily soiled, shear the center cut line before skinning.
  - The area on the carcass where opening cuts are made should be trimmed of contamination.
- Opening cuts should be made with one knife which will be contaminated because the hide cannot be pulled back. Use a second sanitized knife to continue with the skinning or sanitize the first knife.
- Do not allow the hide to fall back onto the carcass while skinning.
  - If the knife goes through the hide or becomes contaminated, clean and sanitize the knife.
- Bunging (loosening the rectum) is usually done during skinning.
  - A circular cut around the anus (rectal opening) must be made, leaving the anal sphincter (muscle) intact.
  - A clean knife must be used for the next cut, which frees the anus and rectum from the surrounding tissue.
  - You must tie off the bung on cattle and bison. This can be done by putting a plastic bag over the end and tying it off together with the neck of the bladder and pushing it into the pelvic cavity.
  - If there is fecal matter present, this should be done for other species such as pigs and sheep/lambs/goats.



## Skinning Sequence

- On young females, skin udders without puncturing the glandular tissue and remove, leaving the super-mammary lymph node intact and attached to the carcass.
- On mature females, remove udder entirely when making the midline cut.
  - Take care not to contaminate the carcass with milk.
- On males, remove the pizzle by cutting around it and detaching at the base of the pelvic bone.
  - Urine may be spilled on the carcass when removing. Best practices are to trim urine when it contacts the outside of the carcass. If there is a considerable amount of urine, mop up excess urine before trimming.



**Urine contamination**

**Brisket:** The brisket is opened after the hide is cut back from the center line and the opening midline is trimmed of contamination.

- Saw the brisket open with a clean and sanitized saw.
- Care must be taken not to go too deep into the internal organs.
- Aitch bone (pelvic bone) on cattle/bison (per brisket): can be cut while skinning or at evisceration. After evisceration and before splitting reduces the potential of puncturing the bung or bladder.
- Remove the hide from the work area as soon as possible.

Washing the carcass while skinning is not a good practice for red meat species due to the potential of spreading contamination. However, if contamination is trimmed during the process, a light wash over the area is recommended.



## Dressing Rabbits

The dressing of rabbits requires consideration of the following:

- Skinning must be done by hanging the carcass with a hook or by using a poultry shackle for smaller rabbits.
  - The skinner's hands and knives must be rinsed frequently and remain visibly clean.
  - Any remaining pieces of intact pelt or hair must be removed by trimming.
  - The carcass must be air-chilled, not water-chilled.

### COMPLETE ACTIVITY 1.2.7

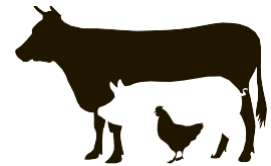
## 1.2.8 Scalding and Dehairing Pigs

The purpose of scalding is to loosen the hair and scurf (dirt and dandruff) from the carcass to facilitate hair removal and to have a clean, skin-on carcass. The temperature of the scalding should be set to approximately 60°C while large sows and boars may require at least 1-2°C higher. It is important to maintain the temperature of the scald water throughout the process since both the number of pigs being processed and the ambient temperature affect the temperature of the scald water. If the scald water temperature is too high, it cooks the carcass; if it is too low, it does not do an effective job.

Scald water can be a potential source of contamination. To prevent contamination of cleaned carcasses and dressing equipment, the scalding tank and the dehairing area should be separated as much as possible from the remaining operations.

### Scalding Cautions

- Too much time in the scalding tank can result in the carcass cooking, skin breaking, and contamination resulting in meat not fit for human consumption.
- If carcasses blister because the water temperature is too high or because the carcass is left in too long, they must be trimmed to remove contamination as soon as possible.
- The scalding tank should be topped off with fresh water as required.
- The scalding tank must be emptied and cleaned at the end of each day that it is used.



The water temperature in the scald tank should be maintained between 60°C – 62°C. Temperatures above this will promote lesions which can increase contamination. Temperatures below this will not facilitate easy hair removal.

All hair must be completely removed after scalding through scraping (with a dehairing machine or manually) and singeing and the carcass thoroughly washed prior to evisceration. When scalding pigs, the feet and heads can be left on the carcass provided the toenails are removed and the area between the toes cleaned. Heads must be properly cleaned and prepared.

### COMPLETE ACTIVITY 1.2.8

### **1.2.9 Scalding and Plucking Poultry**

The purpose of scalding is to loosen the feathers from the carcass prior to feather removal. It is important to maintain the temperature of the scald water throughout the process since both the number of birds being processed and the ambient temperature affect the temperature of the scald water. If the scald water temperature is too high, it cooks the carcass; if it is too low, it does not do an effective job.

There are several factors that influence the scalding process and its role in facilitating feather removal:

- Water circulation, water temperature and cleanliness of the scald water.
- The time the carcasses remain in the scald.
- Effectiveness of defeathering.

Scald water can be a potential source of contamination. To prevent contamination of clean carcasses and eviscerating tools, the scalding tank and the plucking equipment must be separate from the eviscerating area.

- Extended periods in the scalding tank can result in the carcass cooking, skin breaking, and contamination resulting in meat not fit for human consumption.
- Ensure carcasses that blister, either because the water temperature is too high or because the carcass was left in too long, are trimmed to remove contamination as soon as possible.
- The scalding tank should be topped off with fresh water as required.
- The scalding tank must be emptied and cleaned at the end of each day that it is used.

To reduce the attachment of Salmonella and other bacteria to the skin, spray washing of carcasses must occur within 15 seconds after defeathering and again after the carcass has been transferred to the eviscerating area. All feathers and debris must be completely removed from the carcass, including the hocks and any surfaces exposed as a result of bleeding or decapitation. The carcass must be thoroughly washed prior to feet and oil gland removal and evisceration.

### **1.2.10 Eviscerating Red Meat Species**

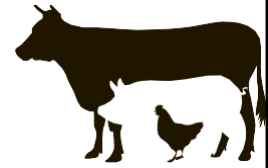
During evisceration, contamination of the carcass can occur from several different sources, so it is important to follow good slaughter practices, knife sanitation and personal hygiene.

Sources of contamination:

- Ingesta - from an untied or punctured esophagus.
- Gut and intestinal contents - from punctured viscera.
- Urine - when the bladder is ruptured while eviscerating.
  - If the bladder is punctured and urine contamination is extensive, after evisceration pull the pleura before washing the carcass.
- Bile - from rupturing the gallbladder when removing the liver.
- Inadequate cleaning and sanitizing between animals.
- Contamination of the knife hand.
- Worker clothing, dirty knives, dirty hands, contact with an unsanitary surface, dirty hides and improper dressing procedures.

## Eviscerating Cautions

If a carcass, or any of its edible parts, is contaminated by stomach contents (ingesta), manure (fecal matter), urine, uterus matter, pus, or any other foreign material, the contaminated area(s) must be immediately trimmed.



During the Process:

- Use a gut wagon (paunch truck) under the carcass to catch the viscera.
- To open for evisceration, place the knife inside the opening between the hind legs.
  - Point the knife to the outside and cut downward towards the brisket opening the whole underside.
  - The hand on the inside deflects the viscera away from the belly and helps avoid any cutting or rupturing of the viscera (see picture).
  - Free the viscera from the surrounding fat tissue by pulling down and out and use a knife to loosen the connective tissue.
- If the gall bladder is ruptured and bile spills on the liver or other carcass parts, they are unfit for human consumption as a result and must be trimmed.
- The kidneys are located in fat covering along the inner side of the loin.
  - It is easier to remove the kidneys when the carcass is warm than after the carcass has cooled.
  - Kidneys of pigs and sheep/lambs are generally left in the carcass.



**Opening for Evisceration**

Note: If the head is to be left on pigs (as for a BBQ pig), then the eyeballs, eardrums and tonsils should be removed.

## COMPLETE ACTIVITY 1.2.10

### 1.2.11 Eviscerating Poultry

**Food safety issues arise during evisceration when:**

- Ingesta or feces come into contact with the clean carcass.
- The viscera are punctured causing contamination.
- The gallbladder is punctured.
  - When the gallbladder is punctured, contamination must be trimmed off. Washing is not sufficient.
- Knives and tools become contaminated.
- Contamination from a previous animal is not cleaned away.

## **During Evisceration – Chicken, Turkey and Duck**

1. Birds must be rinsed after being removed from the plucker and before being opened for evisceration to remove contamination from scalding.
2. All pin feathers should be removed.
3. Feet must be removed.
4. Oil gland must be removed.
5. If the neck is kept, the end exposed during scalding/plucking must be cut back at least 1 cm (.4 inch).
6. Take special care not to rupture the intestines or the gallbladder (bile).
7. All viscera from inside the cavity must be removed including the lungs and kidneys.
8. Identify and trim any pathological conditions, blisters, bruises and contamination.
9. Viscera and inedible waste must leave the evisceration area via a dedicated waste collection bin.
10. Birds must be rinsed thoroughly inside and out prior to chilling.

### **COMPLETE ACTIVITY 1.2.11**

## **1.2.12 Meat Product Harvesting**

Meat products and offal can be used for human consumption provided they are collected, processed and packaged in a hygienic manner. You must get permission from the Meat Inspection Program to harvest organs for human consumption and you must have an approved written procedure.

When harvesting meat products, they must not come into contact with an unsanitized surface after removal from the carcass. Clean and sanitized bins with fresh ice water must be available for offal that is intended to be kept. Bins should never be placed in direct contact with the floor or other unsanitized surface.

### **COMPLETE ACTIVITY 1.2.12**

## **1.2.13 Carcass Splitting – Red Meat species**

### **Beef and Bison**

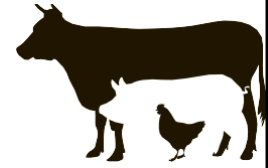
Beef, bison and veal are split completely into two equal sides down the center of the spinal column from the tail to the neck. This is done for ease of handling and improved carcass chilling.

Before splitting the carcass, bruises, warbles, pathological conditions and contamination must be trimmed from the back of the carcass.

The entire spinal column of over thirty-month (OTM) cattle, including the dorsal root ganglia and the spinal cord, can be removed at this stage of dressing and must be handled and disposed of per the CFIA's requirements. Contact your local CFIA office for guidelines on correct removal procedures.

### Splitting Cautions

- After splitting, the saw should be cleaned and sanitized before the next carcass.
- All bone dust should be removed at the final carcass wash.
- When splitting an OTM beef animal, care must be taken not to damage the spinal cord.
  - After splitting, the spinal cord from OTM cattle carcasses must be completely removed and handling and disposal must meet all CFIA requirements for SRM.
- OTM beef animals should be processed at the end of the day after all other non-OTM animals are finished.



**Pigs** are split down the backbone like cattle, but generally left attached at the head. The head must be cleaned and prepared correctly if destined for human consumption. Eyelids, eyes and inner ear must be removed. To avoid spoilage, the brain should be removed if the carcass is split through the head.

**Sheep, lamb and goat** carcasses are generally not split.

## COMPLETE ACTIVITY 1.2.13

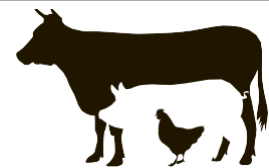
### 1.2.14 Trimming

For red meat species, all contamination, stick wounds, blood clots, bruised tissue, pathological defects and dressing defects must be trimmed prior to the final carcass wash. For poultry, stick wounds, blood clots, bruised tissue, bile, pathological defects and dressing defects must be trimmed, and the carcass must have no surface contamination before the final wash.

If significant signs of disease or damage are found, the entire carcass and offal should be condemned and must not enter the food chain. However, most often only certain parts, for instance those where abscesses are present or a broken bone, need to be removed and destroyed.

#### Trimming

The final trim for all species is the last step to remove all contamination and tissue not fit for human consumption. This becomes a Critical Control Point since the food safety risk cannot be corrected after washing or chilling.



To properly trim, use a clean and sanitized knife and with your non-knife hand pinch the area of contamination. Take enough surface material (generally about 2.54 cm (1 inch) around the affected area) to effectively remove the contamination. Dispose the removed tissue away from the clean carcass.

Only use a clean and sanitized knife for trimming.

#### Surface contamination:

- Hair, dirt, thorns, splinters
- Ingesta, feces, milk, bile
- Stick wound

#### Damaged or diseased tissue:

- Bruises and broken bones
- Necrotic tissue
- Cysts and abscesses
- Arthritic joints

#### Trimming or condemnation may involve:

- A portion of or the entire carcass or tissue that is abnormal or diseased.
- A portion of or the entire carcass or tissue affected with a condition that may present a hazard to human health.
- A portion of, or the entire carcass or tissue that may be repulsive to the consumer.

### **Stick Wounds**

The area around the stick wound must be trimmed to remove the contamination caused when sticking. Generally, 2.54 cm (1 inch) around the wound should be removed unless more is necessary to ensure the area is properly cleaned. For poultry, the exposed neck after scalding and plucking should be trimmed back at least 1 cm (.4 inch).

### **Bruises**

Bruises can occur even on healthy animals and need to be trimmed since blood collects in the bruised area and is an ideal growth medium for bacteria. Severely bruised animals, where a significant amount of tissue needs to be trimmed, should be condemned particularly if the ante-mortem inspection revealed signs of ill health.

### **Broken Bones**

Fractures can be simple (no break in the skin) or compound (bone protrudes through the skin). Compound fractures are more concerning since there is an opportunity for serious infections to develop. The area of hemorrhage and bruising around the fracture site must be trimmed and condemned. On extremities, the limb should be cut off above the fracture and condemned.

### **Necrotic Tissue**

Necrosis is the death of cells in living tissue caused by external factors such as infection, trauma, or toxins. This unhealthy tissue must be trimmed.

### **Cysts and Abscesses**

Cysts, abscess or similar growths should be removed as soon as possible to reduce the risk of accidental puncturing at a later stage. The removal should be deep and wide enough to avoid puncture and release of fluid, pus (dead white blood cells) or gas.

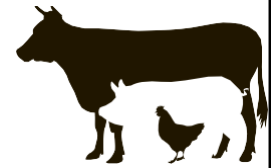
## **COMPLETE ACTIVITY 1.2.14**

### 1.2.15 Post-Mortem Inspection

Examination of the carcass and viscera should be carried out as soon as possible after the completion of dressing to detect any abnormalities and ensure that the meat is fit for human consumption. Animal pathology and meat inspection requires extensive training and is a specialized field. If slaughtering healthy animals, problems are rare. However, when animals show signs such as swelling, discharges and limping during ante-mortem inspection, there is the potential that the meat is not fit for human consumption. It is important to coordinate all the components of ante-mortem and post-mortem findings to make a final decision.

#### Post-Mortem Inspection

- Carcasses that show extensive abnormalities or signs of disease should be condemned.
- Any questionable carcass should not be allowed for human consumption.



#### COMPLETE ACTIVITY 1.2.15

### 1.2.16 Carcass Washing- Red Meat Species

The purpose of the carcass washing procedure is to remove incidental contamination after trimming (e.g. blood specs, bone dust) and to ensure the carcass is free of contamination and pathological conditions before washing and splitting. Washing is no substitute for good hygienic practices during dressing.

- Wiping cloths must not be used.
- Water must be potable, so pathogens are not introduced; cold water is better than hot.
- Carcass wash areas, hoses and equipment should be maintained in a clean and sanitary condition.
- Final washing should proceed from the top of the carcass in a downward direction to prevent recontamination of an area.
  - Overspray should not hit already washed carcasses or common contact surfaces.
- A wet surface favours bacteria and mold growth. Only the minimum required amount of water should be used, and chilling should start immediately.
- Under typical abattoir conditions, bacteria will double in number every 20 or 30 minutes.
- If the cooler is well designed and operating efficiently, the carcass surface will quickly dry out and inhibit bacterial growth.

#### COMPLETE ACTIVITY 1.2.16

## 1.2.17 Chilling

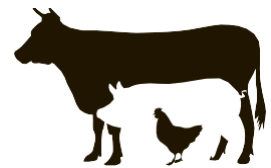
Carcasses must be chilled quickly and stored at a temperature that prevents the growth of disease and spoilage causing microorganisms. Not only does this keep the meat safe, it also extends shelf life and helps rigor set up correctly resulting in meat that is more palatable.

Refrigeration equipment must be capable of chilling the carcass to 4°C and maintaining this temperature while carcasses are being stored. Proper air circulation will assist in keeping carcasses dry which will help prevent the growth of microorganisms.

It is highly recommended that a cooler is available on-site; however, Farmgate and Farmgate Plus licences do not require on-site refrigeration if refrigeration is available within a 30-minute drive. Otherwise, the shelf-life of meat is reduced to days or hours, not weeks.

### Guidelines for carcass chilling in a cooler:

After several hours in the cooler, the outside of a carcass will feel cool to the touch. You must ensure continuous cooling for red meat species so that the surface reaches a temperature of 7°C or less within 24 hours of carcass dressing and continues to cool until the internal temperature is 4°C or less.



As a general guide, a deep muscle temperature of 6–7°C should be achieved in 28 to 36 hours for beef, 12 to 16 hours for pigs and 8 to 10 hours for sheep carcasses. Failure to bring down the internal temperature quickly will result in rapid multiplication of bacteria deep in the meat resulting in off-odours and bone-taint/bone-sour.

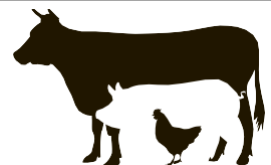
### Poultry Water Bath Chilling

If chill tanks are used to chill poultry, the birds must be immediately placed in the chill tank with fresh ice water 4°C or less. The birds must remain in the chill tank until the internal temperature is 4°C or less. Immediately after cooling, the birds should be bagged, weighed and labeled. Once they are bagged, the birds must be stored at a temperature of 4°C or less or immediately frozen.

- Water and ice must come from a potable source.
- The water bath tank must not be filled beyond its capacity to cool carcasses effectively.
- Water bath tanks must be clean, sanitary and well maintained.
- There must be space around each carcass so they can cool quickly.
- Carcasses should be chilled immediately after dressing.
- Additional ice may need to be added throughout the cooling period.

### Chilling

Chilling and freezing do not kill bacteria, but rather slow their growth rate. If bacteria are present when the meat is chilled or frozen, when the temperature of the meat enters the 'danger zone' (between 4°C and 60°C) the bacteria begin to multiply.





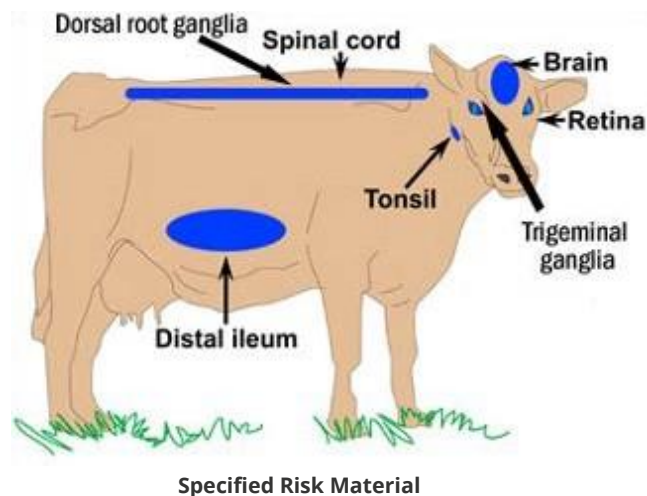
## 1.2.18 Cattle Specified Risk Material (SRM)

Specified Risk Material (SRM) are the parts of cattle where the infectious agent of Bovine Spongiform Encephalopathy (BSE) has been found. It is now widely accepted that these infectious agents are an abnormal form of a protein called a prion. These abnormal prions are misfolded proteins which characterize several fatal neurodegenerative diseases in animals and humans. It is not known what causes the normal protein to fold.

SRMs are regulated and monitored by the Canadian Food Inspection Agency (CFIA).

All Farmgate and Farmgate Plus licence holders that plan to slaughter cattle must follow all appropriate federal legislation related to SRMs. This includes record keeping, handling, transporting and disposal requirements.

The local Animal Health Office of the CFIA must be contacted to ensure you comply with current regulations.



### What are Specified Risk Materials (SRMs)

SRMs include the distal ileum (portion of the small intestine) of cattle of all ages.

On cattle thirty months of age (OTM) or older, SRMs also include the skull, brain, trigeminal ganglia (nerves attached to the brain), eyes, tonsils, spinal cord and dorsal root ganglia (nerves attached to the spinal cord).

- Any storage containers that hold SRM must be labelled SRM and be closable and leak proof. Requirements for landfilling SRMs on the farm of origin are regulated by the BC Ministry of Environment and Climate Change Strategy.
- SRM does not need to be separated from regular slaughter waste if all waste is treated and disposed of as SRM.
- Farmgate Plus facilities slaughtering cattle from other producers can return the SRM with the producer back to the farm of origin.



**Distal ileum**

## **Dedicated SRM Equipment**

When SRMs are removed and separated from other slaughter waste, dedicated knives and waste bins must be used. This is particularly important when removing the heads of OTM cattle even if they are not separated from other slaughter waste. All tools and equipment must be thoroughly cleaned and sanitized between animals.

When separating SRMs, they must be marked with an approved dye including the entire spinal column on OTM cattle. If you are disposing of SRM on your own land, dyeing is not required but the site must be clearly marked and restrictions on access by ruminants apply.

## **Transporting SRM**

Permits are required when transporting SRMs, either the actual separated SRM waste, or an OTM carcass with the dorsal root ganglia intact. These permits can be obtained from your local CFIA office; please contact them for more information.

**COMPLETE ACTIVITY 1.2.18**

## 1.3 The Food Safety Plan

There are two parts to the written food safety plan. The first is the standard operating procedures (SOPs) used during the slaughter process and includes the steps performed, what to do if contamination occurs, on-going sanitation and the records kept. The second is the sanitation standard operating procedures (SSOPs) to ensure the facility is clean at the start and end of the slaughter day and includes how cleaning and sanitation will be done and information on the chemicals used.

The SOPs and SSOPs must be kept up-to-date, reflecting any changes to the establishment, its operational flow and processes. They must meet the requirements set out in the Food Safety Act, the Meat Inspection Regulation and the applicable requirements in the Safe Food for Canadians Regulation.

Written procedures must include a pre-operational checklist for areas, rooms and equipment that must be clean and sanitary before the start of slaughter. Written procedures are also required on how to maintain a hygienic standard during operations.

### Standard Operating Procedures (SOPs)

Every licensed slaughter establishment must document its primary SOPs. Examples of SOPs include: pre slaughter activities, slaughter activities, and post slaughter activities. Each establishment will decide on the level of procedures and the details required based on its particular needs. However, the following elements must be included in each SOP:

- Operational Procedures: a list of steps or activities that define how an operational procedure is done.
- Critical Control Points (CCPs): steps in the slaughter process where a food safety hazard can be controlled and subsequent steps in the preparation process will not eliminate the hazard if it is not controlled at this point. Critical Control Points must be monitored, have upper (or lower) limits applied, and corrective actions identified.
  - Critical Limit: is a measurable food safety standard that must be met at a CCP.
  - Corrective Action: defines the required action when a CCP limit is not met.

Through implementing and maintaining SOPs, the establishment demonstrates that it has set in place critical food safety controls and that these are monitored and maintained on an on-going basis. The SOPs must give enough instruction so that the person responsible for the activity knows what must be done to monitor the CCPs as well as the corrective actions to take when critical limits are not met.

### Sanitation Standard Operating Procedures (SSOPs)

The licence holder must develop, implement and maintain a written SSOP Program that sets out the procedures and schedules for sanitation of the facility and equipment. The written SSOP must give enough instruction so that staff responsible for the activity know what must be done, when it is to be done and what tools and supplies are needed.

## Food Safety Plan Templates

Templates of required SOPs and SSOPs are provided in the Workbook.

SOP#01: EXAMPLE: Pre-Slaughter Readiness	
<b>Written</b> <i>When was the plan written?</i>	<b>Revised</b> <i>When was the plan revised?</i>
<b>Person responsible</b> <i>Who will do the site setup and inspection?</i>	
<b>Frequency</b> <i>When do you do the Pre-Slaughter Readiness</i>	
<b>Procedure</b> <i>Using the information in Table 1.3.1, list what steps will you take to ensure your facility is ready for slaughter day</i>	
<b>Critical Control Point</b> <i>What is the Critical Control Point at this part of the process?</i>	
<b>CCP Monitoring</b> <i>How will you monitor the CCP?</i>	
<b>CCP Limit</b> <i>What is the upper or lower limit for the CCP?</i>	
<b>CCP Corrective Action</b> <i>What corrective action will you take?</i>	
<b>Records</b> <i>What records will you keep to show you ensured the area was ready for start-up?</i>	

### 1.3.1 Food Safety Plan Writing

To begin writing your food safety and sanitation plan, review the following tables and use the acceptable practices to guide you through the process of writing each procedure.

#### Information for SOP#01: Pre-Slaughter Readiness

	Element	Unacceptable	Acceptable
<b>Pre-Slaughter Readiness</b>	<b>All pre-slaughter readiness steps are planned and in keeping with safe and hygienic practice</b>	<ul style="list-style-type: none"> <li>No written plan</li> <li>Written plan not in keeping with safe and hygienic practices</li> </ul>	<ul style="list-style-type: none"> <li>A clear concise plan that demonstrates good food safety practices</li> </ul>
	<b>Potable water is available and used</b>	<ul style="list-style-type: none"> <li>Use of non-potable water during slaughter and cleaning</li> </ul>	<ul style="list-style-type: none"> <li>Only potable water is used at slaughter and for cleaning and sanitation</li> </ul>
	<b>The building, equipment, pens and site are clean, checked and ready</b>	<ul style="list-style-type: none"> <li>Equipment is not properly function</li> <li>Building, equipment or site are not clean and sanitized prior to start up</li> <li>Animal pens are in poor repair</li> <li>Site selected is not appropriate</li> <li>Signs of pest activity</li> </ul>	<ul style="list-style-type: none"> <li>All equipment and meat contact surfaces are clean and sanitized prior to the start of operations</li> <li>Pre-Operational Inspection performed and recorded</li> <li>Site is clean and designed for slaughter</li> <li>No sign of pest activity</li> </ul>
	<b>Cleaning and sanitation facilities are checked and ready</b>	<ul style="list-style-type: none"> <li>No hand wash station with hot and cold running water, towels or garbage cans</li> <li>No knife and equipment sanitation stations</li> </ul>	<ul style="list-style-type: none"> <li>Hand wash stations are set up and ready with hot and cold running water, single use towels and garbage cans</li> <li>Knife and equipment sanitation stations are available</li> </ul>

**COMPLETE ACTIVITY 1.3.1 SOP#01: PRE-SLAUGHTER READINESS**

**Information for SOP#02: Animal Information and Handling**

	<b>Element</b>	<b>Unacceptable</b>	<b>Acceptable</b>
<b>Animal Information and Handling</b>	<b>All animal handling procedures are planned and in keeping with humane and hygienic practices</b>	<ul style="list-style-type: none"> <li>No written plan</li> <li>Written plan not in keeping with humane and hygienic practices</li> </ul>	<ul style="list-style-type: none"> <li>A clear concise plan that demonstrates good animal welfare and food safety practices</li> </ul>
	<b>Animals are transported/ moved, received and housed in ways that minimize stress and contamination</b>	<ul style="list-style-type: none"> <li>Animals are exposed to unnecessary stress or suffering during transportation/ movement to slaughter area</li> <li>Holding pens are in poor repair and could injure the animal</li> <li>No water is available in the pens</li> </ul>	<ul style="list-style-type: none"> <li>Transport/movement handling is done with minimal stress</li> <li>Animal holding pens are appropriate to the species and in good repair</li> <li>Water is available at all times</li> </ul>
	<b>Animal information is recorded, and they are traceable to their farm of origin</b>	<ul style="list-style-type: none"> <li>No records of source of animals</li> <li>No slaughter records</li> <li>RFID tag information not recorded</li> </ul>	<ul style="list-style-type: none"> <li>Source of animals recorded</li> <li>Daily slaughter records kept</li> <li>RFID tag information recorded for retirement and traceability</li> </ul>
	<b>Only animals fit for human consumption enter the food chain</b>	<ul style="list-style-type: none"> <li>No process to assess animal health prior to slaughter</li> <li>Antibiotic withdrawal time not met</li> <li>Dewormer withdrawal time not met</li> <li>Compromised animals are slaughtered</li> </ul>	<ul style="list-style-type: none"> <li>Ante-Mortem Assessment performed</li> <li>Only animals suitable for human consumption are slaughtered</li> <li>All medication withdrawal times are met</li> <li>Animal health is well managed (e.g., veterinary involvement is evident)</li> </ul>
	<b>Feed is withdrawn before slaughter</b>	<ul style="list-style-type: none"> <li>Feed is not withdrawn</li> <li>Feed is withdrawn too soon</li> <li>Water is not available at all times</li> </ul>	<ul style="list-style-type: none"> <li>Feed is withdrawn to reduce carcass contamination by ingesta</li> </ul>
	<b>Animals are stunned humanely and effectively</b>	<ul style="list-style-type: none"> <li>Inadequate restraint</li> <li>Animal not sufficiently separated from other animals</li> <li>Unsafe or inappropriate stunning equipment</li> <li>Inexperienced slaughter person</li> <li>Stunner not licensed (PAL) for live- fire guns when used</li> <li>Ineffective or failure-prone methods of stunning</li> <li>Animal regains consciousness once stunned</li> </ul>	<ul style="list-style-type: none"> <li>Restraint/containment appropriate to stun/kill methods</li> <li>Animals separated</li> <li>Stunning equipment is appropriate to the species</li> <li>Stunner licensed for live-fire gun operation when used</li> <li>Stunning equipment is in good repair</li> </ul>
	<b>Animals are bled effectively, minimizing risk of meat contamination</b>	<ul style="list-style-type: none"> <li>No checking for insensibility prior to bleeding</li> <li>Sticking and bleeding method causes contamination</li> <li>Bleed-out times insufficient</li> <li>Blood not collected and disposed of correctly</li> </ul>	<ul style="list-style-type: none"> <li>Insensibility is properly checked prior to sticking</li> <li>Sticking and bleeding method minimizes contamination</li> <li>Animal is fully bled out prior to further processing</li> <li>Specified Risk Material measures are followed when processing cattle over thirty months of age</li> <li>Blood is collected and disposed of correctly away from the dressing area</li> </ul>

**COMPLETE ACTIVITY 1.3.2 SOP#02: ANIMAL INFORMATION AND HANDLING**

**Information for SOP#03: Dressing Procedures**

	<b>Element</b>	<b>Unacceptable</b>	<b>Acceptable</b>
	<b>All dressing procedures are planned and in keeping with safe and hygienic practice</b>	<ul style="list-style-type: none"> <li>No written plan</li> <li>Written plan not in keeping with safe and hygienic practices</li> </ul>	<ul style="list-style-type: none"> <li>A clear concise plan that demonstrates good food safety practices</li> </ul>
<b>Skinning</b>	<b>Contamination of exposed meat surfaces is prevented when skinning</b>	<ul style="list-style-type: none"> <li>Skinning method brings meat into contact with the ground or other unhygienic surfaces</li> <li>No handwashing provisions</li> <li>Handwashing not done on a regular basis</li> <li>Knives and invasive tools are not kept clean and sanitized</li> </ul>	<ul style="list-style-type: none"> <li>Species specific skinning methods are used that protect meat from contamination</li> <li>Skinning starts at neck wound</li> <li>Knife edge is kept up</li> <li>Handwashing available</li> <li>Handwashing done regularly</li> <li>Knives and invasive equipment kept clean and sanitized</li> </ul>
	<b>Removal of contamination from the carcass is done on a regular basis</b>	<ul style="list-style-type: none"> <li>Surface contamination is not removed on an as-needed basis</li> <li>Surface contamination is rinsed off, not trimmed off</li> </ul>	<ul style="list-style-type: none"> <li>On-going surface contamination (hair, ingesta, feces, urine, milk, etc.) trimming is done</li> </ul>
	<b>Inedible material at skinning is disposed of in a way that prevents cross-contamination</b>	<ul style="list-style-type: none"> <li>Leaving hides out in the open</li> </ul>	<ul style="list-style-type: none"> <li>Clear process to separate waste through the skinning process</li> </ul>
<b>Scalding and Dehairing Pigs</b>	<b>Scalding is done at the correct temperature and for the correct duration</b>	<ul style="list-style-type: none"> <li>Animal is not rinsed off before being placed in scald</li> <li>Scald water not hot enough</li> <li>Scald water too hot</li> <li>Animal left in scald too long</li> <li>Scald water not cleaned regularly</li> </ul>	<ul style="list-style-type: none"> <li>Animal is rinsed before being placed in the scald</li> <li>The scald water is the correct temperature</li> <li>The animal is not left in the scald too long</li> <li>Scalding methods protect meat from contamination</li> <li>Scald water cleaned out regularly</li> <li>Handwashing available</li> <li>Handwashing done regularly</li> </ul>
	<b>Dehairing technique used is effective</b>	<ul style="list-style-type: none"> <li>Dehairing is done in a way that contaminates meat-contact surfaces</li> <li>Not all hair is removed</li> <li>Toenails are left on</li> <li>The area between the toes is not cleaned out</li> <li>Singeing (torch) is done for too long and the carcass cooks</li> <li>Singeing does not remove remaining hair</li> </ul>	<ul style="list-style-type: none"> <li>All meat contact surfaces are protected from dehairing contamination</li> <li>All hair is effectively removed through a combination of scraping and singeing</li> <li>Toenails are removed</li> <li>The area between the toes is cleaned out</li> <li>Carcass is rinsed after removal of all hair before opening for evisceration</li> </ul>

Information for SOP#03: Dressing Procedures continued...

	Element	Unacceptable	Acceptable
Scalding and Plucking Poultry	Scalding is done at the correct temperature and for the correct duration	<ul style="list-style-type: none"> <li>Scald water not hot enough</li> <li>Scald water too hot</li> <li>Animal left in scald too long</li> <li>Scald water not cleaned regularly</li> </ul>	<ul style="list-style-type: none"> <li>The scald water is the correct temperature</li> <li>The bird is not left in the scald too long</li> <li>Scalding methods protect meat from contamination</li> <li>Scald water cleaned out regularly</li> <li>Handwashing available</li> <li>Handwashing done regularly</li> </ul>
	Plucking technique used is effective	<ul style="list-style-type: none"> <li>Feathers and pin feathers are left on the bird</li> <li>Birds are not rinsed after plucking and before evisceration</li> </ul>	<ul style="list-style-type: none"> <li>All feathers and pin feathers are removed</li> <li>Birds are rinsed before, removal of feet, oil glands and opening for evisceration</li> </ul>
Evisceration	Carcass is opened and eviscerated in such a manner as to prevent contamination of meat	<ul style="list-style-type: none"> <li>Technique leads to a high potential for viscera (guts) to be punctured</li> <li>Equipment used is not adequate or properly maintained</li> <li>Bung and esophagus not tied to prevent contamination</li> </ul>	<ul style="list-style-type: none"> <li>Viscera (guts) are removed appropriately</li> <li>Organ meats are separated and chilled as soon as possible</li> <li>Bung and esophagus tied on bison and cattle</li> </ul>
	Diseased meat products (hearts, livers, kidneys, etc.) are not released for human consumption	<ul style="list-style-type: none"> <li>No knowledge or process for identifying abnormalities</li> </ul>	<ul style="list-style-type: none"> <li>Checklist exists for abnormalities of concern</li> <li>Contact person identified for checking up on uncertain situations</li> </ul>
	Inedible material at evisceration is disposed of in a manner to prevent cross contamination	<ul style="list-style-type: none"> <li>Viscera (guts) are not disposed of away from meat handling areas after removal</li> <li>Viscera is not disposed of to prevent consumption by other animals</li> </ul>	<ul style="list-style-type: none"> <li>Viscera (guts) are removed from area as soon as possible</li> <li>Viscera is disposed of in an approved manner</li> </ul>
	Removal of contamination from the carcass is done on a regular basis	<ul style="list-style-type: none"> <li>Surface contamination is not removed on an as-needed basis</li> <li>Surface contamination is rinsed off, not trimmed off</li> </ul>	<ul style="list-style-type: none"> <li>On-going surface contamination (hair, ingesta, feces, urine, milk, etc.) trimming is done</li> </ul>
Final Trim	The carcass has no visible contamination, no damaged tissue and is free of all pathological conditions	<ul style="list-style-type: none"> <li>Broken bones are not removed</li> <li>Bruises are not removed</li> <li>Ingesta, feces, hair, urine, milk are not removed</li> <li>Pathological conditions are not removed</li> </ul>	<ul style="list-style-type: none"> <li>Broken bones are removed</li> <li>Bruises are removed</li> <li>Ingesta, feces, hair, urine, milk are removed</li> <li>Stick wound is trimmed</li> <li>Pathological conditions are all removed</li> </ul>



**Information for SOP#03: Dressing Procedures continued...**

	<b>Element</b>	<b>Unacceptable</b>	<b>Acceptable</b>
<b>Splitting and Washing</b>	<b>Carcasses are correctly split</b>	<ul style="list-style-type: none"> <li>• Dirty equipment</li> <li>• Contamination is not trimmed along the midline before splitting</li> <li>• Use of non-food grade grease and oil</li> <li>• No, or limited, knowledge or consideration of SRM procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Equipment is clean and sanitization</li> <li>• Contamination along the midline is trimmed before splitting</li> <li>• Food grade grease is used</li> <li>• CFIA's SRM procedural requirements are met when splitting OTM beef carcasses or if removing the dorsal root ganglia</li> </ul>
	<b>Blood and bone dust are removed from the surface of the carcass</b>	<ul style="list-style-type: none"> <li>• Wiping with a towel</li> <li>• Washing is done before removing all contamination, bruises, broken bones, splinters, etc. and pathological conditions</li> </ul>	<ul style="list-style-type: none"> <li>• All contamination, bruises, broken bones and pathological conditions are removed prior to final carcass wash</li> </ul>
<b>Post-Mortem Assessment</b>	<b>Only meat fit for human consumption enters the food chain</b>	<ul style="list-style-type: none"> <li>• No system in place to assess carcasses post-mortem</li> <li>• Carcasses that show extensive abnormalities or signs of disease are passed</li> </ul>	<ul style="list-style-type: none"> <li>• Carcasses that show extensive abnormalities or signs of disease are condemned</li> <li>• No questionable carcass is allowed for human consumption</li> </ul>
<b>Specified Risk Material</b>	<b>Specified Risk Material (SRM) is removed, handled and disposed of according to CFIA requirements</b>	<ul style="list-style-type: none"> <li>• No SRM records are kept</li> <li>• Dedicated equipment is not used to remove SRM</li> <li>• SRMs are not handled correctly</li> <li>• SRMs are not disposed of correctly</li> </ul>	<ul style="list-style-type: none"> <li>• SRM records are kept</li> <li>• Dedicated equipment is used to remove SRM</li> <li>• SRMs are handled correctly</li> <li>• SRMs are disposed of correctly</li> </ul>

**COMPLETE ACTIVITY 1.3.3 SOP#03: DRESSING PROCEDURES**

**Information for SOP#04: Post Slaughter Activities**

	<b>Element</b>	<b>Unacceptable</b>	<b>Acceptable</b>
<b>Chilling</b>	<b>Carcasses are adequately chilled to minimize growth of bacteria and prevent spoilage</b>	<ul style="list-style-type: none"> <li>No cooling equipment on site and ambient temperature too high</li> <li>Distance to off-site cooler greater than 30 minutes</li> <li>Chilling equipment used isn't large enough for the volume</li> <li>Chilling equipment is in poor repair</li> <li>Evidence of mould and mildew in the chilling equipment</li> </ul>	<ul style="list-style-type: none"> <li>Distance to off-site cooler is within the guidelines (e.g. 30 minutes)</li> <li>Cooler size is adequate for planned capacity</li> <li>Ice available for small carcasses if needed</li> <li>Chilling equipment is properly maintained</li> <li>Chilling equipment is properly cleaned and sanitized regularly</li> </ul>
<b>Labeling and Traceability</b>	<b>Carcass and meat are labeled to allow traceability and allow consumers to identify origin of meat</b>	<ul style="list-style-type: none"> <li>Not labeled as per regulations</li> </ul>	<ul style="list-style-type: none"> <li>Labeled as per regulations. See the Section "Keeping Track"</li> </ul>
	<b>Sales records are kept for traceability</b>	<ul style="list-style-type: none"> <li>No sales record kept</li> </ul>	<ul style="list-style-type: none"> <li>Accurate sales record kept</li> </ul>
	<b>Recall procedures are in place</b>	<ul style="list-style-type: none"> <li>No recall plan in place</li> </ul>	<ul style="list-style-type: none"> <li>Recall plan in place</li> <li>Mock recall done</li> </ul>
<b>Transportation of Carcasses</b>	<b>Contamination of meat is avoided in transport</b>	<ul style="list-style-type: none"> <li>Carcasses are not covered during transport</li> <li>The transport vehicle is not clean</li> </ul>	<ul style="list-style-type: none"> <li>Carcasses are covered to prevent dust or other contamination</li> <li>Transported on a cleanable surface</li> <li>OTM beef carcasses are marked and transported as per CFIA requirements</li> </ul>

**COMPLETE ACTIVITY 1.3.4 SOP#04: POST SLAUGHTER ACTIVITIES**

**Information for SSOP#05: Cleaning and Sanitation**

	<b>Element</b>	<b>Unacceptable</b>	<b>Acceptable</b>
<b>Facility and Equipment Cleaning and Sanitizing</b>	<p><b>Walls, floors, doors, tables, common contact surfaces are cleaned and sanitized at the end of the slaughter day</b></p> <p><b>All equipment is cleaned and sanitized at the end of the slaughter day</b></p> <p><b>All waste collection bins are cleaned and sanitized at the end of the slaughter day</b></p>	<ul style="list-style-type: none"> <li>• Inadequate or improper cleaning and sanitation</li> <li>• Cleaning isn't done before sanitizer applied</li> <li>• Cleaning and sanitation aren't done at the end of the day</li> <li>• Meat product is present when cleaning and sanitizing</li> <li>• Chemical sanitizers are not mixed according to instructions</li> <li>• No sanitizer is used</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaning then sanitizing is done immediately after all meat products have been removed</li> <li>• Chemical sanitizers are mixed according to manufacturer's instructions</li> </ul>
	<p><b>Coolers and chill tanks are cleaned and sanitized regularly</b></p>	<ul style="list-style-type: none"> <li>• Inadequate or improper cleaning and sanitation</li> <li>• Cleaning isn't done before sanitizer applied</li> <li>• Chemical sanitizers are not mixed according to instructions</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaning and sanitizing are done on a regular basis</li> <li>• Chemical sanitizers are mixed according to manufacturer's instructions</li> </ul>
	<p><b>Pens, crates and animal holding areas are cleaned regularly</b></p>	<ul style="list-style-type: none"> <li>• Dirty pens, crates and cages</li> <li>• Mud buildup in pens</li> <li>• Evidence of pest activity</li> </ul>	<ul style="list-style-type: none"> <li>• Pens, crates and cages are clean</li> <li>• No sign of pest activity</li> </ul>
	<p><b>During slaughter, cleaning and sanitizing are done on an as-needed basis</b></p>	<ul style="list-style-type: none"> <li>• Inadequate or improper cleaning and sanitation is done when needed during slaughter</li> <li>• Invasive tools are contaminated</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaning and sanitizing are done on a regular basis</li> </ul>
	<p><b>Clothing worn during slaughter is clean</b></p> <p><b>Clothing in contact with meat is clean and sanitized</b></p>	<ul style="list-style-type: none"> <li>• Dirty smocks are worn</li> <li>• Contaminated aprons can come into contact with the carcass</li> <li>• Fresh, clean clothes are not worn</li> </ul>	<ul style="list-style-type: none"> <li>• Fresh, clean clothes worn</li> <li>• Smocks are changed when become heavily soiled</li> <li>• Aprons are sanitized regularly throughout the day and at the end of the day</li> </ul>

**COMPLETE ACTIVITY 1.3.5 SOP#05: CLEANING AND SANITATION AND  
FILL IN THE CLEANER AND SANITIZER INFORMATION**

## RECORD TEMPLATES

### Sales Record

Product	Date of Sale	Quantity (weight)	Customer Name and Phone #

### Pre-Operation Inspection Checklist

Date	Area or Equipment	Clean, Sanitized and Ready for Processing	Maintenance or Action Required

### Processing Record (Slaughter Log)

Date	Species Slaughtered	Quantity	Animal Owner Name, Address and Phone #	Tag #s

**Ante-Mortem Assessment Card**

<b>Observations of Animals</b>		
Animal Type, Age, Identifying Marks, Owner		
Animal identification (CCIA tag, CSIP, Herd Marker, etc.)		
	<b>NO</b>	<b>YES</b>
Heavily soiled animals (segregate)		
Abnormal breathing pattern, coughing, difficulty breathing		
Abnormal behaviour – walking in circles, pushing, aggressive, anxious, dull		
Abnormal gait – difficulty walking and/or moving		
Abnormal posture – head tilted, feet stretched, neck extended		
Abnormal discharges (nasal, bloody diarrhea, excessive salivation, body extrusions)		
Abnormal colour – yellow colour of eyes, black feet from gangrene		
Abnormal appearance – swelling, bloating, enlarged jaws, swollen legs		
Abnormal odour		
Dead in Pen or a Downer		

**Complaint Log**

<b>Date</b>	<b>Customer</b>	<b>Details of Complaint</b>	<b>Action</b>	<b>Date Completed</b>

**Specified Risk Material Logs**

SRM Logs for removal and transporting of carcasses containing SRMs must meet CFIA requirements.

Contact your local CFIA office for more information on recorded requirements.

# MODULE 2 - HUMANE SLAUGHTER

## 2.1 Animal Welfare

Farmgate and Farmgate Plus facilities are unique in that many of the animals processed at the facilities are also raised at that facility/farm. Farmgate and Farmgate Plus licence holders have a responsibility for not only the care and welfare of the animals during slaughter but also while they are living on the farm.

Animal Welfare is the physical and psychological well-being of animals. Why is animal welfare important to you?

- It is the right thing to do.
- Good welfare promotes optimum production and minimizes loss.
- Your customers expect good welfare.
- Consumers and society expect it.
- The law requires it!

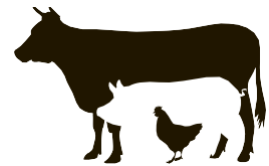
Those involved in the production and processing of animals at a Farmgate or Farmgate Plus facility must have a clear understanding of animal welfare and their responsibility in providing proper care and handling.

Animal welfare can be most easily defined as what the animal is experiencing and how they are coping with their environment. As a slaughter person it is your responsibility to continually strive to provide the highest level of animal welfare to the animals in your care.

### Animal welfare

Proper animal welfare practices include:

- providing safe and protective shelter and housing;
- providing feed and water that meet their needs;
- providing health care - preventative, diagnostic and treatment;
- handling all animals humanely, with care and no abuse; and
- ensuring all animals experience a humane end of life whether through slaughter or euthanasia.



### COMPLETE ACTIVITY 2.1

**Each slaughter facility and farm that raises and/or slaughters or sells meat products should have a written animal welfare policy. The following page has an example of a simple animal welfare policy.**

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## **Animal Welfare Policy Insert Company Name**

We at Insert Company/ Farm Name are committed to providing optimal welfare to the animals in our care. We do this by providing them with:

- shelter to protect them from the elements;
- facilities that are safe and conducive to animal movement;
- water and feed as needed and required;
- immediate attention if they become injured or ill, and
- humane end of life at slaughter.

We at Insert Company/Farm Name also have zero tolerance for animal neglect and abuse. If any member of our staff is observed abusing or neglecting animals, including those delivering animals to the facility, they will be immediately disciplined including the possible referral to the appropriate authorities.

---

Insert Manager or Owners Name, Management

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### **Insert Company Name Animal Welfare Policy For Clients**

We at Insert Company Name have a high expectation of animal care for animals delivered to our facility. We expect that animals will be:

- transported in a humane manner and in compliance with all regulations;
- healthy, sound and free of disease, and
- handled in a humane manner, with no striking, kicking or abusive use of handling tools.

Anyone observed abusing or neglecting animals, including those delivering animals to the facility, will be immediately reported to management. These actions may result in suspension from the facility and/or possible referral to the authorities.

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Insert Manager or Owners Name, Management

### 2.1.1 Canadian Codes of Practice for the Care and Handling of Farm Animals

The Codes of Practice are nationally developed guidelines for the care and handling of farm animals in Canada. The Codes reflect our national understanding of animal care requirements and recommended practices. The Code Development Committee and the Scientific Committee work together to develop science- and consensus- based Codes. The result is Codes that are scientifically informed, practical, and reflective of societal expectations for responsible farm animal care.

Stakeholder commitment is key to ensure quality animal care standards are established and implemented. Stakeholders include farmers/producers, transporters, veterinarians, animal welfare and enforcement agencies, retail and food service organizations, processors, governments and researchers.

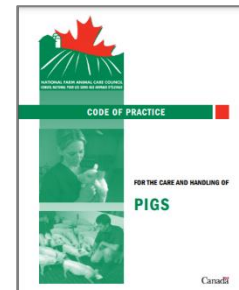
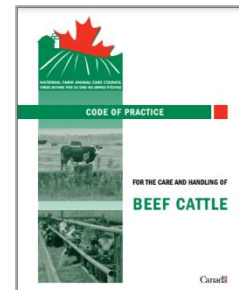
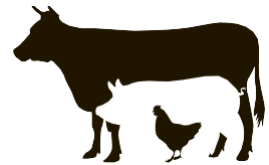
Codes of Practice are intended to promote sound management and welfare practices through recommendations and requirements for housing, care, transportation, processing and other animal husbandry practices. Codes serve as educational tools, reference materials for regulations, and the foundation for animal care assessment programs.

All Canadian animal care assessment programs require that producers have copies of the applicable Codes available. Copies of the Codes can be found at [www.nfacc.ca/codes-of-practice](http://www.nfacc.ca/codes-of-practice).

#### The Codes of Practice provide producers with:

**REQUIREMENTS** - These refer to either a regulatory requirement, or an industry-imposed expectation outlining acceptable and unacceptable practices and are fundamental obligations relating to the care of animals. Requirements represent a consensus position that these measures, at minimum, are to be implemented by all persons responsible for farm animal care. When included as part of an assessment program, those who fail to implement requirements may be compelled by industry associations to undertake corrective measures, or risk a loss of market options. Requirements also may be enforceable under federal and provincial regulation.

**RECOMMENDED PRACTICES** - Recommended practices may complement a Code's requirements, promote producer education and can encourage adoption of practices for continuous improvement in animal welfare outcomes. Recommended practices are those which are generally expected to enhance animal welfare outcomes, but failure to implement them does not imply that acceptable standards of animal care are not met.



#### COMPLETE ACTIVITY 2.1.2



## 2.1.2 Regulations

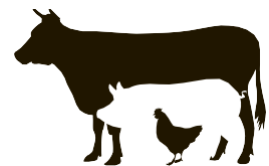
Those tasked with the slaughter of animals for food must also be aware of and comply with all regulations pertaining to care and slaughter of animals. All food safety and animal health regulations are covered in the first module of this manual. The regulations for animal welfare are listed below. The regulations are enforced by Canadian Food Inspection Agency (CFIA), police officers, and BC Society for Prevention of Cruelty to Animals (BC SPCA).

Licence holders have an obligation to ensure that all who assist with the care and slaughter of animals, including employees, contractors and family members, are properly trained with respect to animal handling and care.

Clients must also be made aware of your expectations of care when receiving animals at your facility. Clients are expected to follow the regulations regarding transportation and the welfare of animals. If you witness any instances of abuse or neglect it is your responsibility to notify the authorities. The box below outlines the applicable animal welfare laws, which areas they pertain to, and who is responsible for enforcement.

### COMPLETE ACTIVITY 2.1.3

**The regulations and legislation regarding farm animal welfare in British Columbia, including slaughter at Farmgate and Farmgate Plus facilities, are:**



**The Health of Animals Act and Health of Animals Regulations:**

- Enforced by the CFIA.
- Pertains to the welfare of all animals during transport.
- Part XII applicable to the transportation of all livestock across the province, including at processing plants and auctions markets.

**Criminal Code of Canada:**

- Enforced by law enforcement officers.
- Jurisdiction anywhere animals are present including on farm.

**BC Prevention of Cruelty to Animals Act:**

- Enforced by the BC SPCA and law enforcement officers.
- Pertains to the welfare of all animals in the province.
- Jurisdiction anywhere animals are present including on farm.

## 2.2 Facilities

Many of the animals processed at Farmgate and Farmgate Plus facilities are also raised at that facility. licence holders have a responsibility to care for and ensure welfare of animals during slaughter and while they are living on the farm. This section contains information for the slaughter area and for the production area of the farm.

Adequate shelter should protect animals from adverse weather conditions including the wind. Bedding must provided in colder regions and for muddy conditions.

All housing facilities must have adequate lighting to allow for effective observation of all animals.

Facilities should be designed to facilitate movement of animals through the facility and allow handlers to safely work with the animals without putting themselves in harm's way.

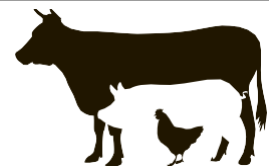
Ramps and chutes must be properly constructed and maintained for safe and low stress loading and unloading. If ramps are used, they cannot exceed 20° for pigs, 25° for cattle and 35° for sheep. Cleats should be evenly placed at 8" on center and sides tall enough to keep animals from falling or jumping off.

Pens must be the appropriate size to allow an animal to move about without injuring itself. Space required per animal should be based upon the minimum requirements of the Code of Practice for the specific species being housed. (For access to the Code of Practice visit [www.nfacc.ca](http://www.nfacc.ca)).

Flooring should be non-slip throughout the facility, including in the restraint area. Flooring can include dirt (not mud), stamped concrete, clean rubber mats or anything that provides good grip.

### **All facilities and areas where animals are housed and handled must have:**

- non-slip flooring;
- no sharp or protruding objects that can injure the animal (i.e. nails, broken boards);
- no gaps or spaces where an animal can get trapped;
- enough space for all animals to lie down;
- adequate means to effectively contain the animal; and
- access to water.



## Rabbits

Hutches for rabbits must be the appropriate size to allow an animal to move about without injuring itself.

The hutch must allow the rabbits to adopt normal resting and sitting positions and when sitting upright their ears should not come in contact with the top of the cage. All rabbits in a hutch must be able to lie down at the same time. Space required per animal should be based upon the minimum requirements of the Code of Practice for Rabbits. (For access go to [www.nfacc.ca](http://www.nfacc.ca)).

Wire or mesh flooring must be provided to allow for passage of manure and urine. Plastic coated wire or plastic slatted floors are best for rabbits.

Rabbits housed in tiers must be protected from manure and urine from pens above them.

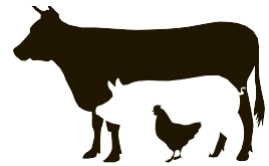
## Poultry

Birds must have enough room to freely move around, turn around and stretch their wings easily. They must all have enough room to lie down at the same time.

Good quality litter must be maintained.

### COMPLETE ACTIVITY 2.2

Every food animal in a holding pen awaiting slaughter must be provided with access to potable water and, if held for more than 24 hours, be provided with feed. Water sources should be protected from contamination and freezing. Water troughs and buckets must be kept clean and should be checked daily to ensure they are working.



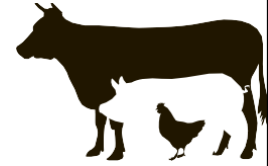
## 2.3 Transport

Production animals are transported from the auction mart or purchase point, to the veterinary clinic, to and from pasture, between farms or to a slaughter facility.

Transport standards and regulations must be followed in all cases. The transportation of livestock in Canada is overseen by the CFIA. This includes animals transported by land, air, rail or vessel.

**The Health of Animals Regulations Part XII Transportation of Animals defines conditions for the humane transportation of all animals in Canada by all modes of transport by:**

- Prohibiting overcrowding, transportation of incompatible animals in the same compartment and transportation of animals unfit to travel.
- Specifying appropriate conditions for loading and unloading of animals including handling, adequate feeding and watering regimes, maximum transit times, minimum rest periods and bedding requirements.
- Defining unfit and compromised animals and conditions they can be transported under.
- Requirements for training, record keeping and transfer of care.
- The CFIA enforces these regulations through routine inspections, unannounced site inspections and response to reports of noncompliance.



**ALL PRODUCERS INCLUDING FARMGATE AND FARMGATE PLUS SLAUGHTER PERSONS AND FACILITIES MUST BE AWARE OF AND ADHERE TO THE *HEALTH OF ANIMALS ACT PART XII.***

Vehicles used to transport animals must provide a safe environment for the animals. All transport vehicles must have:

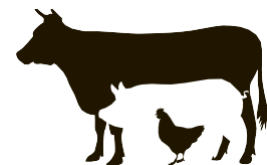
- Proper flooring (stable and non-slip).
- Proper ventilation.
- Adequate space for the species being transported (trailers, crates or boxes).
- Access for easy loading and unloading of animals.
- No sharp or protruding objects that can injure the animal.
- Protection from severe weather conditions.
- Regular cleaned and sanitized.

Only animals that are fit to be transported can be considered for transportation as per the *Health of Animals Act Part XII*. More information can be found on CFIA's Humane Transport and Animal Welfare web page by searching "CFIA Humane Transport".

**COMPLETE ACTIVITY 2.3**

It is the responsibility of all Farmgate and Farmgate Plus licence holders to only accept animals fit for transport at their facilities.

If an animal is non-ambulatory, it must not be dragged or moved in a way that would cause further pain and suffering. It is against the law to drag or move a conscious animal in a way that will cause further pain or suffering. If an animal cannot move on its own, it must be euthanized on the spot.



## COMPROMISED

### As per the Health of Animals Regulations Part XII, a compromised animal:

- is bloated but has no signs of discomfort or weakness;
- has acute frostbite;
- is blind in both eyes;
- has not fully healed after a procedure, including dehorning, detusking or castration;
- is lame other than in a way that is described in the definition unfit;
- has a deformity or a fully healed amputation and does not demonstrate signs of pain as a result of the deformity or amputation;
- is in a period of peak lactation;
- has an unhealed or acutely injured penis;
- has a minor rectal or vaginal prolapse;
- has its mobility limited by a device applied to its body including hobbles other than hobbles that are applied to aid in treatment;
- is a wet bird; or
- exhibits any other signs of infirmity, illness, injury or of a condition that indicates that it has a reduced capacity to withstand transport.

## UNFIT

### An unfit animal:

- is non-ambulatory;
- has a fracture that impedes its mobility or causes it to exhibit signs of pain or suffering;
- is lame in one or more limbs to the extent that it exhibits signs of pain or suffering and halted movements or a reluctance to walk;
- is lame to the extent that it cannot walk on all its legs;
- is in shock or is dying;
- has a prolapsed uterus or a severe rectal or severe vaginal prolapse;
- exhibits signs of a generalized nervous system disorder;
- is a pig that is trembling, has difficulty breathing and has discoloured skin;
- has laboured breathing;
- has a severe open wound or a severe laceration;
- has sustained an injury and is hobbled to aid in treatment;
- is extremely thin;
- exhibits signs of dehydration;
- exhibits signs of hypothermia or hyperthermia;
- exhibits signs of a fever;
- has a hernia that:
  - impedes its movement, including when a hind limb of the animal touches the hernia as the animal is walking,
  - causes the animal to exhibit signs of pain or suffering,
  - touches the ground when the animal is standing in its natural position, or
  - has an open wound, ulceration or obvious infection;
- is in the last 10% of its gestation period or has given birth during the preceding 48 hours;
- has an unhealed or infected navel;
- has a gangrenous udder;
- has severe squamous cell carcinoma of the eye;
- is bloated to the extent that it exhibits signs of discomfort or weakness;
- exhibits signs of exhaustion; or
- exhibits any other signs of infirmity, illness, injury or of a condition that indicates that it cannot be transported without suffering.

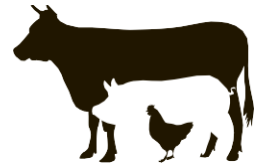
## 2.4 Animal Behaviour and Handling

### 2.4.1 Animal Handling

Handlers must familiarize themselves with the best handling practices for the species with which they are involved. Humane handling must occur at all stages of production and during slaughter.

#### Effective livestock handling requires an understanding that:

- Animal handling difficulties normally arise from animal temperament problems, facility problems and personnel problems.
- The three most common mistakes made by handlers are: rough handling, excessive prodding and overcrowding.
- The key to effective livestock handling is understanding the natural behaviour of prey animals.
- Livestock behaviour is often reflective of the handling techniques applied by their caregivers.



Animals should be handled in a positive way, regularly, to allow the animal to get used to the handler and facilities. This will allow for a calmer animal when it comes time for stunning. For example, handlers could walk the pen with the pigs daily, which would reduce handling difficulty and stress on slaughter day.

Livestock behaviour is often reflective of the handling techniques applied by their caregivers. Roughly handled animals will be flightier and more fearful.

Livestock, as grazing species, are prey animals. Humans are predators. Common prey animal traits include:

**Strong herd instinct** - they will panic when isolated or separated from the herd.

**Monocular vision due to eye placement on the side of their head** - this type of vision makes their depth perception very limited with their heads up. They will balk at things like shadows, water puddles and lines on the ground.

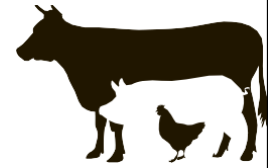
**Motivated by fear and food** - these are the two main things that livestock prey animals need to survive. These motivators can be utilized to move them.

**Reactive to rapid movement** - rapid movement is perceived to be a threat and will cause them to be fearful and flee.

If an animal is in an unfamiliar place or where it does not want to be, it will revert to instinctual fight or flight behaviour.

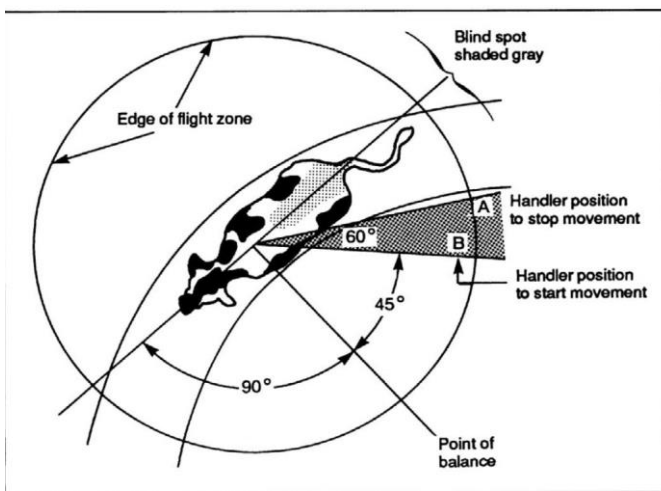
Animals should be handled quietly and with care to avoid unnecessary stress, pain or injury. Livestock respond best to visual pressure - not physical pressure.

## UTILIZING THE FLIGHT ZONE

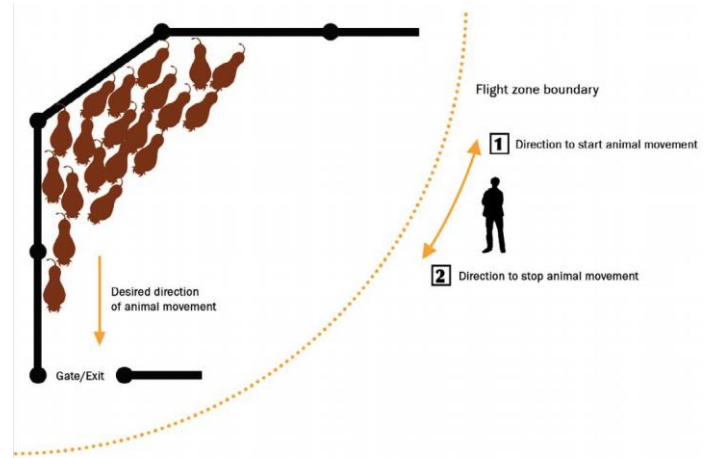


All animals have flight zones. This is the space or distance an object, person or another animal needs to be away from an animal before invoking the fight or flight response. Flight zones are located around an animal and in the space above them - anywhere within their line of vision. The flight zone is the “stop and go” mechanism for moving livestock.

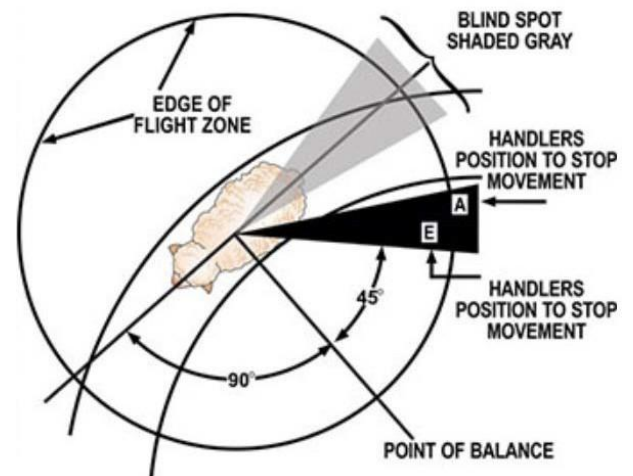
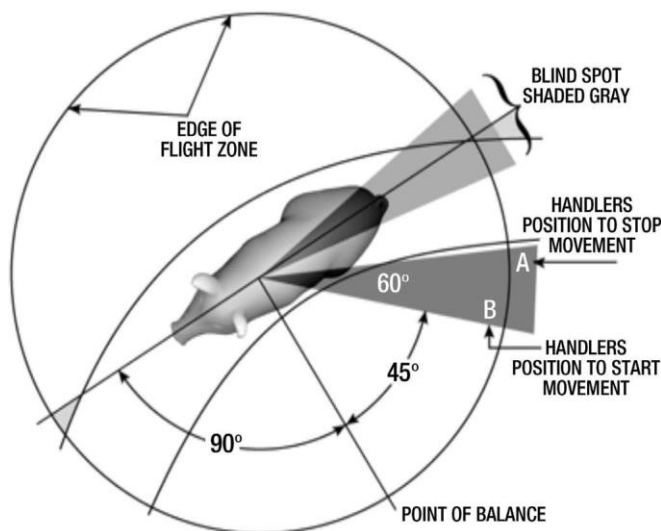
Sight is the main sense used by the animal in determining their flight zone. They must see the pressure to respond to it. For this reason, the positioning of the handler is important. You cannot stand in the animal’s blind spot and expect it to respond.



The animal flight zone: positions A and B are the most efficient positions for controlling livestock movement. (Livestock Markets Association of Canada)



Adapted from Lanier J.L. & Grandin T. (1999) *The Culling of American Bison (Bison bison) During Routine Handling*. Available at: [www.grandin.com/references/bison.paper.html](http://www.grandin.com/references/bison.paper.html)



## COMPLETE ACTIVITY 2.4.1

## Rabbits and Poultry

If moving rabbits or birds over long distances or across the farm, it is best to do so with a crate or carrier. Rabbits and birds should only be carried over short distances.

A rabbit's hind-end is very powerful and if not supported it can kick out and injure its back. Mature rabbits must have their body and hind-end supported while being carried.

Rabbits must never be carried or lifted by their legs or ears. To pick up, gently grasp the loose skin behind the rabbit's neck or at the shoulder blades. Use other hand to support the rabbit's hind-end. Always carry rabbits close to your body.

Rabbits can be calmed by covering their eyes, by placing their head under your arm. Set rabbits down by placing them on their feet first.

Warn birds (i.e. knock on door, turn on light) before entering the barn to avoid startling them. Low lighting or blue lighting is recommended when catching birds as it calms them.

Use corralling to group and move birds.

Birds must not be carried solely by their head, neck, one wing or tail feathers. Carry large turkeys by both legs and a wing, sitting them down on their breast.

Birds must be placed in transport containers in an upright position. Minimize passing of birds between handlers.

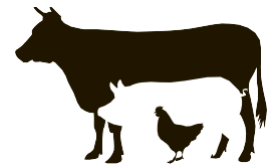
### 2.4.2 Handling Tools

All livestock handling tools should be used in a way that will not cause injury or distress to the animal.

Effective handling tools are often designed to apply visual and/or auditory pressure such as rattle paddles and flags.

Handling tools should have no objects on them that will injure the animals.

Rattle paddles are a common handling tool. They attract the attention of the animal, provide an extension of the handler's arm and apply visual pressure. They must never be used to strike an animal.



#### COMPLETE ACTIVITY 2.4.2

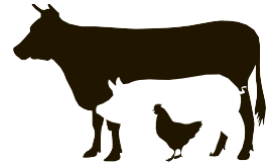


## 2.5 Humane Slaughter

Farmgate and Farmgate Plus licence holders are responsible for humane pre-slaughter handling and stunning of animals. They must ensure that all animals always receive a humane death. The following information provides guidance for humane slaughter for all approved methods.

### To ensure a humane death for an animal at slaughter:

- A person competent in slaughter must stun the animal using an approved, humane method.
- Correct stunning must cause the animal to become immediately insensible.

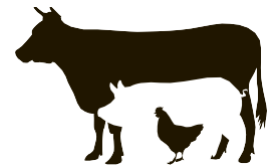


### 2.5.1 Pre-Slaughter Management

All facilities and equipment must be set-up and ready to receive animals before animals are presented for slaughter.

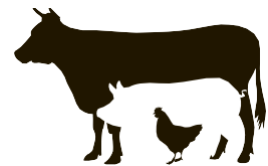
Slaughter persons should be prepared and ready to receive animals.

- The pre-slaughter environment should be one that is quiet and calm.
- Animals should be handled quietly and with care to avoid unnecessary stress, pain or injury.
- The stunning area should be a safe environment for effective stunning.



### Before you bring the animal into the kill area:

- Prepare area for stun and bleed, so you can efficiently move from stun to bleed. Have all equipment readily available and set up.
- If using electrical stunning, ensure the electrodes are clean.
- If using a captive bolt gun, pressurize compressor, attach air canister, or have proper cartridges ready, dependent on the type of gun you are using.
- If using electric stunning on birds, ensure the contact area is clean and wet the birds as/if needed.
- Place birds in acceptable restraints such as cone or shackles. Birds should be restrained as briefly as possible.



## Restraint

Cattle/Bison	Pigs	Sheep	Goats	Poultry
Restraining chute	Stun box	Restraining chute	Restraining chute	Cones
Squeeze chute	Pen	Pen	Pen	Shackles
Stun box		Stun box	Stun box	
Pen				

Animals can either be restrained or contained during the slaughter process. If a restraint is used:

### All species

- Must allow safe access to the animal for application of the stunning method.
- Cause no pain or distress to the animal. There can be no sharp or protruding objects that could injure the animal.
- Allow for quick and easy removal from device.
- Allow quick access to the neck of animal for bleeding.
- Only one animal should be placed in the restraining device at a time.

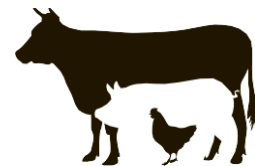
### Red Meat

- Should be narrow enough to prevent an animal from turning around.
- Have non-slip flooring when applicable.
- Be properly lit to prevent baulking. Lighting should come from above and not be pointed directly into an animal's face.
- In the case of a squeeze chute for cattle or bison, optimal pressure must be applied to restrain the animal without injuring them. Animals will often vocalize if the pressure applied by the chute is too much.

### Poultry and Rabbits

- Rabbits should never be restrained on their back.
- Birds must be hung by both legs when shackled.
- Geese and ducks require extra care and body support as they are picked up and shackled by both legs because of anatomical differences in where the legs are positioned on the body compared to other poultry.
- Shackles must be designed for the size of animals they will be holding.
- Lower light levels will help calm birds while in shackles.

**Do not** restrain an animal until everyone is ready to stun. Minimal time in the restraint is best for the animal.



## COMPLETE ACTIVITY 2.5.1

## 2.5.2 Selecting Methods of Slaughter

When selecting a method of stunning, consider: the safety of everyone involved; animal welfare, age and type; equipment suitability; slaughter person skill level and comfort; and legal restrictions.

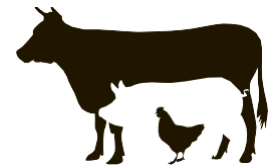
### Acceptable Methods of Slaughter

Firearm	Captive Bolt	Electrical	Rapid Decapitation
Cattle	Cattle	Cattle <sup>1</sup>	Poultry
Bison	Sheep	Sheep	
Sheep	Goats	Goats	
Goats	Pigs	Pigs	
Pigs	Poultry and Rabbits	Poultry and Rabbits	

(1) Though listed as acceptable method, electrical stunning of cattle is not commonly practiced in North America and not recommended in Farmgate and Farmgate Plus facilities.

#### Failed stunning can result from:

- Inaccurate stunning device placement
- Faulty or improperly maintained equipment
- Improper application of the method



**If stunning fails, a plan for the use of an alternate method should be in place.**

### COMPLETE ACTIVITY 2.5.2

## 2.5.3 Gunshot

Gunshot kills by mass destruction of the brain. The degree of brain damage inflicted by the bullet is dependent upon the firearm, nature of the ammunition and accuracy of the shot.

### Selection of Firearm

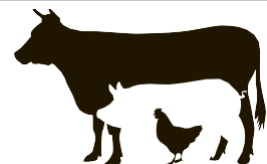
The correct selection of ammunition and calibre of gun is vital to single-step success. The bullet must maintain enough energy to effectively penetrate the skull of the animal but not so much it passes through the skull. Ideally, the bullet will penetrate the skull and then lose all the energy within the brain, doing the maximum amount of damage while coming to a stop in the brain.

As the bullet passes through the air, it loses its kinetic energy. The further it travels, the less kinetic energy it has at it hits the target. This is why close-range shots do not require the same amount of kinetic energy as a longer distanced shot. Bigger animals require more kinetic energy to be delivered to the brain.

Both rifles and shotguns are acceptable if they have the appropriate energy to stun/kill the animal.

The three main considerations when choosing a firearm and ammunition are:

1. The size of the animal
2. The thickness of the skull
3. The distance between the shooter and the animal



<b>Guideline for Firearm Use</b> (Adapted from the Code for Practice for cattle, pigs, sheep, goats, bison)	
<b>Cattle - yearling &amp; mature</b>	Require a minimum of 1356 joules (1000ft-lb) muzzle energy. Examples of appropriate firearms include a centrefire high powered rifle or shotgun (20 gauge or greater, from no more than 10m [32ft]).
<b>Pigs</b>	Shotguns using slugs are recommended for mature pigs due to the requirement for higher energy to penetrate the skull. Shotguns can provide this energy and velocity while reducing risk of ricochet.
<b>Sheep</b>	Require a minimum of 407 joules (300ft-lb) muzzle energy. Examples of appropriate firearms include a centrefire high powered rifle or shotgun (20 gauge or greater, from no more than 10m [32ft]). Minimum of .22 calibre firearm using "long-rifle" hollow-nosed ammunition and .22 magnum for horned animals or shotgun with appropriate ammunition.
<b>Bison</b>	Require a minimum of 1356 joules (1000 ft-lb) muzzle energy (63). Shotgun with slugs are also acceptable for yearlings and cows but not mature bulls.

<b>Examples of muzzle energy for common firearms</b>		
Cartridge type (rifle)	Cartridge	Muzzle Energy (ft-lb) <sup>1</sup>
Rimfire	.22 long rifle	105
	17 HMR	245
	22 Win Mag	338
Centrefire	223 Remington	1296
	7.62 x 39 mm	1527
	30-30	1903
	243 Winchester	1925
	270	2345
	260 Remington	2354
	308 Winchester	2719
	30-06 Springfield	2750
	7mm Rem Mag	3221
	300 WM	3548
	338 Lapua Mag	4938
Shotgun squared	20 Gauge, 2 3/4" - 3/4 - oz slug	1587
	12 Gauge, 2 3/4" 1- oz slug	2491

<sup>1</sup> Muzzle energy (ft-lb) = Mass (in grains) X velocity squared (in ft per second) / 450400. Energy (ft-lb) X 1.355817948 = Energy (joules) (64,65)

Figures from [www.shooterscalculator.com/bullet-kinetic-energy.php](http://www.shooterscalculator.com/bullet-kinetic-energy.php)

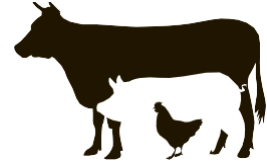
## Application

Consistency in the correct placement of the shot takes skill and practice.

Plan the trajectory so that the bolt or projectile travels through the brain. The best place to penetrate the head is where the bullet/slug will meet minimal resistance with the most direct path to the desired areas of the brain, insuring maximum damage and destruction to the brain.

### When choosing between a shotgun and rifle considerations include:

- Shotguns are best for close range shots (less than 20 feet).
- Only slugs should be used in shotguns.
- Shotguns significantly reduce the chance of ricochet.
- Rifles are best for longer range shots (greater than 20 feet).
- There is a greater chance of ricochet with a rifle.
- A slaughter person must be aware of and abide by all firearm regulations within their area including the federal requirement for a firearms Possession and Acquisition Licence (PAL) and whether the discharge of firearms is allowed.



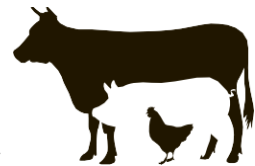
The trajectory of the bullet is also important. The bullet's path must be towards the mid-brain and brain stem. The angle of fire must take into account the trajectory of the bullet, the position of the person shooting (ground level, above the animal) and the position of the animal's head.

Always be aware of your surroundings, the location of people and other animals.

If the first shot is not effective, immediately apply a second shot. If the first shot is not accurately placed, target the correct spot. If the first shot is accurately placed but not effective, target approximately 2.54 cm (1 inch) above and slightly to the side of the first shot.

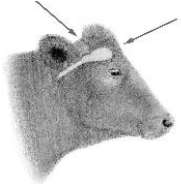
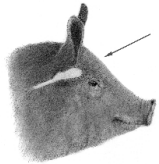
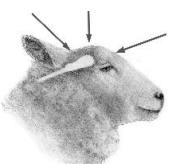

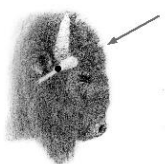
### When using a firearm for slaughter:

1. Be prepared before you bring the animal into the kill area:
  - Have the firearm ready format bullets, numbers consistently
  - Have the proper ammunition, including spare ammunition ready
  - Be prepared for shackle and bleeding.
2. Load your weapon.
3. Wait for the animal to calm down/settle if necessary. Be Patient!
4. Find the target on their head - Shoot.
5. If an animal shows any signs of sensibility, you will need to immediately shoot the animal again.



## COMPLETE ACTIVITY 2.5.3

### Description and Diagrams of Shooting Locations (Firearms)

	<p><b>CATTLE:</b> In cattle, the brain does not sit between the eyes, but it is located high in the head. The shooting position is in the center of the forehead where two imaginary lines cross. The lines are drawn between the inside corner of the eyes and the center of the base of the opposite horn or where a horn would be if the animal had one. Within a 2.54 cm (1 inch) range of this point is your target area.</p>
	<p><b>PIGS:</b> In pigs, the brain does not sit between the eyes, but it is located high in the head. The pig's brain is quite small in relation to the size of their skull. As pigs mature their skulls grow larger and a sinus cavity forms in front of their brain, setting their brain deeper back into the skull. Mature sows and boars also have very thick frontal bones in their skull, making penetration of a bullet more difficult. There is also variation in skull shapes - as some pigs have a sloped face while other breeds have a more dish-shaped face. Each of these facts make pigs more challenging to shoot than other species and the accuracy of shot is critical to success. With market hogs, the shooting position is where two imaginary lines intersect, drawn from the midpoint of each ear to the middle corner of the opposite eye. This is about 2.54 cm (1 inch) above the brow line of the eyes. The shooting position for mature sows and boars is the intersection of two lines drawn from the top of where the ear attaches to the middle corner of the opposite eye.</p>
	<p><b>SHEEP:</b> In sheep the brain does not sit between the eyes, but it is located very high in the head. The frontal shooting position for sheep is approximately 2.54 cm (1 inch) above the eyes. In horned animals, the best shot with the least amount of skull mass is the poll* position. The shot should be aimed towards the throat and mouth.</p>
	<p><b>GOATS:</b> In goats the brain does not sit between the eyes, but it is located high in the head. The frontal shooting position for goats is approximately 2.54 cm (1 inch) above the eyes. In horned animals, the best shot with the least amount of skull mass is the poll* position. The shot should be aimed towards the throat and mouth.</p>
	<p><b>BISON:</b> The desired entry point of the bullet is centered approximately 2.54 cm (1 inch) higher than an imaginary line connecting the bottom of the horns. The angle should be perpendicular to the skull. Bison that are alarmed or aggressive will often face the threat and stand with the head in a more elevated position. Do not attempt a forehead shot in this case, as the bullet will glance off the bone.</p>

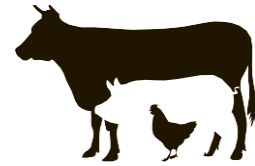
*\*The poll is a name of the part of an animal's head, alternatively referencing a point immediately behind or right between the ears.*

## 2.5.4 Captive Bolt Gun

Penetrating or non-penetrating captive bolt guns are acceptable for use on all species. Like gunshot, captive bolt guns stun or kill by mass destruction of the brain. When applied correctly, a captive bolt gun will render an animal immediately insensible.

### Effectiveness of the captive bolt gun is dependent on:

- Accurate placement.
- Energy of bolt (bolt velocity).
- Depth of penetration.
- Both penetrating and the non-penetrating captive bolts must be firmly held flush (perpendicular) to the skull of the animal.



Like firearms, captive bolts are available in a variety of calibres. Larger calibre guns are more suitable for larger animals.

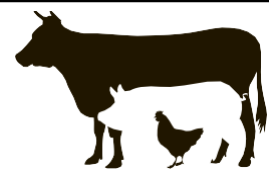
To achieve the maximum depth of penetration and concussion, the bolt must reach maximum acceleration before making contact with the head. The larger the skull, the more resistance the bolt will meet, so correct calibre and cartridge choice is critical.

Bolt velocity depends on maintenance (especially cleaning) and storage of the cartridge charges.

All ammunition must be stored in accordance with Canadian Firearms Regulations. Ammunition must be stored in a humidity free container and have no exposure to moisture. One of the leading causes of failed or an ineffective stun is poor gun maintenance.

Captive bolt guns must be regularly cleaned (after each day of use) and maintained to insure proper operation and effectiveness.

Animals need to be restrained for captive bolt guns as the gun must be held flush to the animal's head to be applied.


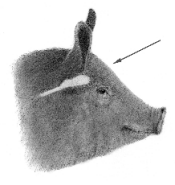
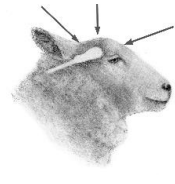



### Application

**Red Meat (Beef, Sheep, Goats, Pigs, Bison).** Follow the same pre-stunning procedures as firearms.

As with firearms, the best place to penetrate the head is where the bullet/slug will meet minimal resistance with the most direct path to the desired areas of the brain, insuring maximum damage and destruction to the brain. The target location of the captive bolt gun may vary with some species as the trajectory of the bullet can be different than that of the free bullet due to the fact the captive bolt gun is held flush and perpendicular to the skull.

If the first shot was not effective a second shot must be applied. If the first was NOT accurately placed, target to the correct spot. If the first shot was accurately placed, target approximately 2.54 cm (1 inch) above and slightly to the side of the first shot.

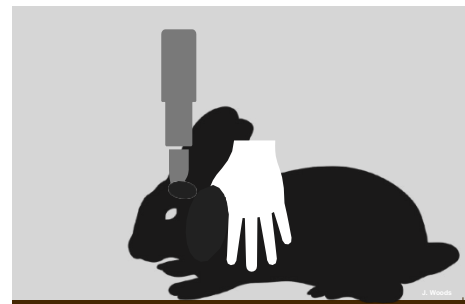
Description and Diagrams of Shooting Locations (Captive Bolt)	
	<b>CATTLE:</b> Cattle must be restrained within a chute, knockbox or by halter for captive bolt gun application. The shooting position is the center of the forehead where two imaginary lines cross. The lines are drawn between the inside corner of the eyes and the center of the base of the opposite horn or where a horn would be if the animal had one. Within a 2 cm (.8 inch) range of this point is your target area.
	<b>PIGS:</b> Pigs should be contained or restrained for captive bolt euthanasia. Restraint can be confinement in a knock box or with a snare. For targeting on market hogs, you cross two imaginary lines drawn from the midpoint of the base of the ear to the middle corner of the opposite eye. For mature hogs, draw the same lines except from the top of where the ear attaches, to the middle corner of the opposite eye.
	<b>SHEEP:</b> Sheep must be restrained or contained within a chute, knockbox or by halter. For sheep with no horns, the best positioning for the captive bolt gun is the front or the top of the head. For the front of the head, draw a midline connecting the base of their two ears at the highest point and aim straight down towards their throat in the center of the line. For the top of the head, place the muzzle in the center of the crown of the head.
	<b>GOATS:</b> Goats must be restrained or contained within a chute, knockbox or by halter for captive bolt gun application. For goats with no horns, the best positioning is in the middle of the forehead just above the eyes, aiming down along the angle of the neck. For horned goats, a firearm into the poll of the animal aiming for the mouth.

### Poultry and Rabbits - Non-penetrating Captive Bolt Guns

Targeting for both birds and rabbits is the top of the head.

Care needs to be taken when placing the gun against the rabbit's head as the skin over the head of a rabbit is loose and if it slips, it can make the aim inaccurate.

If the first shot is not effective a second application must be immediately applied.



**Rabbit Restraint and Captive Bolt Gun placement**

### COMPLETE ACTIVITY 2.5.4

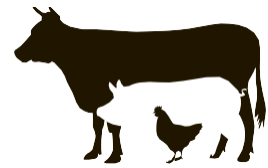
### 2.5.5 Electrical Stunning – Poultry

Electrocution induces death by physical disruption of the brain and/or hypoxia (oxygen starvation) by rendering the brain insensible, followed by cardiac arrest.

The slaughter person must be aware of the basic principles of electrical stunning. Electrical stunning of poultry is a single-stage, head only stunning process and is considered a reversible stun.



For electrocution to be considered humane, it must be performed with appropriate equipment – preferably a constant current system. For animal welfare and human safety reasons, only properly designed and tested devices should be used.



### Stunning Knife

Only commercially manufactured stunning knives should be used for stunning of birds or rabbits. The shackles must be grounded.

A stunning knife delivers a voltage shock to the birds or rabbits immediately before sticking occurs.

The switch is operated, and the current allowed to pass through the head for about ten seconds.

When done properly this will immediately stop the animal's struggling, preventing broken bones and bruised bodies. A 10 second application will also ensure that the feathers do not tighten making them easier to remove.

Minimum Currencies for Handheld or Automated Electrical Stunning Device Poultry (CFIA)	
Frequency	Minimum Current (mA/bird)
Chickens	240 mA
Turkeys	400 mA

### 2.5.6 Rapid Decapitation

Rapid decapitation is a legal slaughter method for poultry and involves severing the neck close to the head with a sharp instrument.

However, research has shown that there may be brain activity for up to 30 seconds after decapitation, and that loss of sensibility may not be immediate. A slaughter method that stuns the animals before bleeding or decapitation is preferable.

If rapid decapitation is used, adequate restraint must be applied.

The best form of restraint is a cone. Once the animal is in the cone, a sharp knife can be used to decapitate the animal close to the head, ideally in one swift cut.

### COMPLETE ACTIVITY 2.5.6

## 2.6 Bleeding

Slaughter animals are normally killed by “bleeding-out” – the severing of major blood vessels in the neck or at the base of the heart to ensure rapid blood loss. This is also referred to as “sticking.” The animal dies from blood loss.

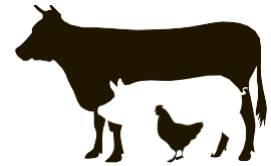
For most animals, and in most situations, stunning before bleeding is a requirement for slaughter. However, there are two important exceptions:

1. Rapid decapitation for poultry and rabbits with appropriate restraint.
2. Animals killed by ritual slaughter for Islamic or Jewish cultural requirements.

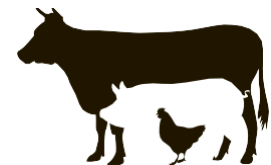
Animal welfare is not the only reason that rapid and complete bleed-out is important; meat quality is also negatively affected by poor bleeding.

Stunned animals that are not bled-out immediately may eventually die of the injuries caused (e.g., by a bullet or captive bolt stunner) but can become conscious again before death, in which case they would experience significant suffering.

All animals must be confirmed insensible before bleeding or hoisting occurs.



Sticking or bleed-out must be carried out quickly enough so that sufficient blood loss occurs before the animal is likely to become conscious again. This is called the stun-to-stick interval.



### 2.6.1 Stun-to-Stick Interval

Stun-to-stick interval varies depending on the method of stunning and how well it was applied.

Species, sex and age of the animal may also affect the depth of stun for any given method. For example, using a captive bolt stunner on an old boar will not cause as deep a stun as the same captive bolt stunner on a young market hog, as differences in the shape and thickness of the skull will affect how much damage is done to the brain.

After reversible stunning, an animal can remain insensible for 10 seconds to more than 60 seconds. This gives the slaughter person a narrow window of time for the actual kill.

#### COMPLETE ACTIVITY 2.6.1

## 2.6.2 Bleeding

### Poultry

1. Hold the head of the bird in the left hand so that the left side of the neck is uppermost.
2. Place the blade of the knife just behind and below the ear lobe.
3. Pull the knife forward for a short distance just behind the jawbone, at the same time rolling the head slightly with the left hand to the left and applying a little upward pressure.
4. The trachea, (windpipe) must not be severed or the neckbone cut into as this leads to incomplete bleeding and makes plucking more difficult.

### Rabbits

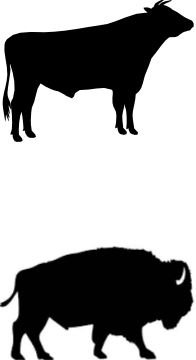

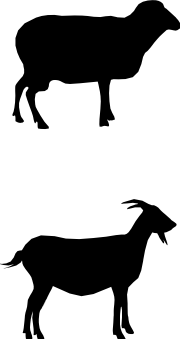
1. Rabbits are decapitated for bleeding.
2. Ensure the knife is sharp and decapitation takes place in one swift cut and the head is fully removed.

### Stun to Stick Interval

Method	Stun-to-Stick Interval
Firearms	A maximum 60 seconds is recommended
Penetrating Captive Bolt Gun	A maximum 60 seconds is recommended
Non-penetrating Captive Bolt Gun	Maximum 10 seconds
Head Only Electrical	Pigs, Poultry and Rabbits - 15 seconds. Sheep maximum 10 seconds
Head and Heart Electrical	A maximum 60 seconds is recommended

**COMPLETE ACTIVITY 2.6.2**

## Bleeding

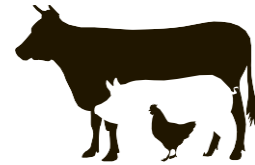
	<p><b>Cattle / Bison:</b> The best method to bleed cattle / bison is to cut the vessels as close to heart as possible in the chest. The major blood vessels are biggest here, so when they are cut the blood loss is rapid, insuring a quicker death.</p> <p>To bleed cattle / bison:</p> <ol style="list-style-type: none"> <li>1. Stand to one side of the animal.</li> <li>2. With one knife open the skin at the base of the neck.</li> <li>3. Put the knife in a place to be cleaned and sterilized.</li> <li>4. Take a second knife and cut the blood vessels where they come out from the heart.</li> <li>5. You cannot see where you must cut but feel up between the neck muscles and into the chest cavity.</li> <li>6. A good cut will produce rapid blood flow.</li> </ol>
	<p><b>Pigs:</b> Pigs are best bled by sticking in the chest.</p> <ol style="list-style-type: none"> <li>1. The knife is inserted in the mid-line of the neck, at the depression in front of the breastbone.</li> <li>2. With light pressure on the point of the knife, the skin should be raised up as the knife is pushed in.</li> <li>3. When the knife has gone in, lower the knife handle so that the blade points up towards the pig's tail.</li> <li>4. Continue to push upwards to sever all major blood vessels coming from the heart.</li> </ol>
	<p><b>Sheep / Goats:</b> Sheep and goats can be bled two ways - in the chest or across the throat.</p> <p>Chest bleed:</p> <ol style="list-style-type: none"> <li>1. Insert one knife in the mid-line of the neck, at the depression in front of the breastbone and open the skin at the base of the neck.</li> <li>2. Put the knife in a place to be cleaned and sterilized.</li> <li>3. Take a second knife and cut the blood vessels as they come out from the heart, between the neck muscles in the chest cavity.</li> </ol> <p>Throat bleed:</p> <ol style="list-style-type: none"> <li>1. The sheep / goat is cut across the throat from ear to ear, close to the head.</li> <li>2. Sever both the carotid arteries and both the jugular veins.</li> </ol>

## 2.7 Insensibility

Stunning is not the same as killing – in fact, many commonly used methods of stunning are reversible and do not immediately kill the animal. The stunning process should be carried out in a way that ensures an animal goes on to die without regaining consciousness.

As some methods of stunning cause violent kicking, there may be only a few seconds available to test for insensibility.

After stunning and before any further slaughter steps such as bleeding or hoisting takes place you must confirm that the stun was successful, and that the animal is insensible.



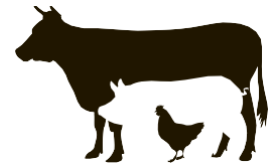
### Confirmation of Insensibility

Confirmation of insensibility should occur within the first 30 seconds following the stun. Since head only electrical stunning should be bled within the first 15 seconds and non-penetrating captive bolt within 20 seconds, insensibility must be confirmed immediately following stun.

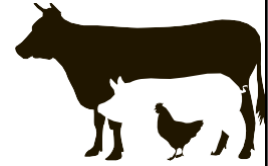
The signs of insensibility can vary depending on the method of stunning, how well the stun was carried out, and the species and age of the animal. The signs of insensibility provided below can be observed with every method of stunning.

### Signs of Insensibility:

- Absence of rhythmic breathing. Rhythmic breathing is breathing in a normal manner with the ribs moving in and out at least twice. Intermittent gasping or agonal which is best described as breathing like a fish out of water - is acceptable after electrical stunning - this is not a sign of sensibility. This type of breathing should not be seen with use of firearm or captive bolt gun.
- Fixed, glassy eyes with no natural blinking or reflexes:
  - The palpebral reflex causes blinking when running a finger along the eyelashes.
  - The menace reflex causes blinking when hand waved over eye.
- Head is loose and floppy, tongue is flaccid. Head will be dead - it will hang straight for cattle and pigs, but sheep will have the neck on an angle with a limp and floppy head. The tongue will be straight and limp.
- No vocalization. Animals will not vocalize when they are insensible



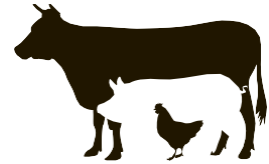
It is the responsibility of all licence holders to only accept animals that are fit for transport at their facilities.



If an animal is non-ambulatory, it must not be dragged or moved in a way that would cause further pain and suffering. It is against the law to drag or move a conscious animal in a way that will cause further pain or suffering. If an animal cannot move on its own, it must be euthanized on the spot.

An animal is sensible if it:

- lifts its head off the ground or attempts to right itself;
- vocalizes after the stun;
- shows eye movement or blinking, or
- responds to painful stimuli (e.g., pinching the nose).



If an animal is not rendered insensible on the first attempt, the operator must be ready to re-stun immediately.

## COMPLETE ACTIVITY 2.7