A national program to identify responsible practices that contribute to sustainability, cattle care and disease protection for beef cattle operations in Canada. This manual is a supplement to the VBP Producer Manual version 7.7 which addresses on-farm food safety practices.

BUILDING TRUST THROUGH SUSTAINABLE BEEF PRODUCTION
Verified Beef Production Plus (VBP+) is an initiative by the Canadian Cattlemen’s Association and Beef Cattle Research Council.

Funds to build VBP+ come from Agriculture and Agri-Food Canada’s AgriMarketing Program - Assurance Systems Stream of Growing Forward 2
Verified Beef Production Plus (VBP+) is an expansion of the Canadian beef industry’s recognized on-farm food safety program to include animal care, biosecurity and environmental stewardship. These are areas of interest for consumers and food companies, and identifying responsible or sustainable practices assist in building transparency with customers and the international marketplace.

Development of these new modules has been industry-led. Facilitated by the Canadian Cattlemen’s Association, the end result is as a set of practice outcomes for the farm and feedlot level. Program elements have involved cattle producers, veterinarians, researchers and other stakeholders beyond the farm gate to ensure relevance.

VBP+ adheres to the founding principles of building a practical solution that is robust, affordable and credible. It continues to offer the voluntary audit option based on recognized audit principles, and using 3rd party auditors.

VBP+ allows producers to prove their practices against national standards such as the Code of Practice for Beef Cattle Care, national beef biosecurity standard, and environmental farm plans (EFPs). Outcomes highlighted in grey shading in this manual are a requirement if a cattle operation is aiming for full Registration status. They are also identified separately in the box titled program requirements.

**Moving Forward with Implementation**

Producers who want to initiate or work toward full VBP+ Registration status will need to complete a self-assessment on the new modules and submit a copy to their provincial VBP+ coordinator.

- If not prior-Registered with VBP+ as per the on-farm food safety module, once a self-assessment is complete, cattle operations can request an on-farm validation audit by contacting their provincial VBP+ coordinator.
- After successful completion of the initial audit, or if already audited, the cattle operation then meets ongoing Registration assessments which are a pattern of annual records assessment or self-declarations, with a re-audit in the 9th year.
- Beef cattle operations must continue to meet applicable municipal, provincial and federal animal health, traceability and environmental regulatory requirements.
- Cattle operations must be prepared to foster a working environment where employees are treated with equity/respect and safe working conditions exist. Staff and/or family members are trained or mentored on what is expected.
- It is recommended that cattle operations are willing to share aggregate information to BIXS or other means, so that stakeholders in the beef value chain can source cattle that meet marketing claims.
- Sample records that assist in demonstrating conformance with VBP Plus program are available in hardcopy or electronic format.
ANIMAL CARE

This module focuses on the quality care that beef cattle operations and feedyards provide to their livestock on a daily basis. It is based on Canada’s Code of Practice for the Care and Handling of Beef Cattle released in September 2013, in particular the summary of requirements as described on pages 56 to 61. Practices on cow-calf, backgrounding and in feedyards will be reviewed in an audit with the intent that outcomes related to feed/water, veterinary care, shelter, herd health, euthanasia, handling, transportation, and painful procedures are met.

It is expected that a valid vet/client/patient relationship exists where veterinary advice is sourced particularly regarding animal health and prudent use of antibiotics. This will vary by size and complexity of the operation but is important to demonstrate responsible practices. Evidence as an example include written veterinary prescriptions or possible vaccines purchased from a vet clinic. Veterinarians are key in a partnership approach to successful animal health outcomes.

Beef cattle operations need to mentor employee, family and volunteer help to ensure cattle are treated appropriately and as quietly as possible. This ensures cattle well-being and that people doing the work can complete with care and result in a safe and a successful outcome. The mistreatment of any cattle must not be tolerated, and cattle operations need to be able to address less-than-adequate handling immediately so that actions are not repeated.

In addition biosecurity practices appropriate to the operation may assist in avoiding disease outbreaks or reduce disease transfer, and are outlined elsewhere in this manual. These practices complement animal health and should also be considered as part of on-going efforts to avoid introducing a disease wherever possible.

Beef cattle operations must meet Canada’s Code of Practice for the Care and Handling of Beef Cattle requirements. The following is intended to outline outcomes that will be assessed by a VBP Plus on-farm validation audit and subsequent annual assessments.

PROGRAM REQUIREMENTS

Outcomes related to feed/water, veterinary care, shelter, herd health, euthanasia, handling, transportation and painful procedures are met.

A. ANIMAL HEALTH

- Cattle must have access to areas, either natural or man-made, that provide relief from weather that is likely to create a serious risk to their welfare. Cattle kept in groups must be able to move freely around the pen and access feed and water.
- The operation has access to equipment or facilities for the safe handling, restraint, treatment, segregation, loading, and unloading of cattle. Stocking density must be managed such that weight gain and duration of time spent lying is not adversely affected by crowding.
- Design or manage indoor and outdoor cattle facilities to provide well-drained, comfortable resting areas. Maintain indoor air quality and ventilation at all times.
- Provide traction in handling areas to minimize cattle slips and falls. Cattle housed indoors that do not have access to natural light should/must be provided with supplementary lighting to allow natural behaviour patterns and monitoring of the cattle.
- All cattle in a group must have sufficient space to adopt normal resting postures at the same time. The operation provides an environment that is safe and clean for calving and that promotes calf survival.
Monitor cattle for health on an ongoing basis to ensure prompt treatment or care. Provide appropriate care, convalescence or treatment for sick, injured or lame cattle without delay.

Monitor the animals’ response to therapy or care and, if the initial treatment protocol fails, then reassess treatment options or seek veterinary advice.

Euthanize without delay cattle that are unlikely to recover, fail to respond to treatment and convalescent protocols, have chronic, severe, or debilitating pain and distress, are unable to get to or consume feed and water, or show continuous weight loss or emaciation.

Handling Cattle

Animal handlers are familiar with cattle behaviour (either through training, experience or mentorship) and use quiet handling techniques.

Electric prods must only be used to assist movement of cattle when animal or human safety is at risk or as a last resort when all other humane alternatives have failed and only when cattle have a clear path to move.

Electric prods are not used repeatedly on the same animal, nor on the genitals, face, udder or anal areas, or on calves less than 3 months of age.

Willful mistreatment or intentional harm of cattle is unacceptable. This includes but is not limited to: beating an animal; slamming gates on animals; allowing herd dogs to continue pushing cattle with nowhere to move; dragging or pushing cattle with machinery (unless to protect animal or human safety).

Calving Assistance and Surgical Procedures

Monitor cows and heifers to identify calving difficulties and ensure prompt assistance when required. Promptly assist calves and recently-calved cows showing signs of distress.

Monitor that newborn calves suckle their dams paying special attention to high risk cases. Administer colostrum or a commercial colostrum substitute to any newborn calf showing signs of not having received it by suckling.

Caesarean sections must be conducted by a veterinarian or qualified trained personnel using accepted surgical techniques and appropriate local anesthesia and post-operative pain control.

Spaying must be carried out by a veterinarian or qualified trained personnel. Consult your veterinarian on pain control when spaying heifers.

Brand, Dehorning, Castration and other procedures

When branding is required for export, by policy, or as permanent proof of ownership, it must be performed with the proper equipment, restraint and by personnel with training or sufficient combination of knowledge and experience to minimize pain to the animal. Do not brand wet cattle due to risk of scalding.

Dehorning must be performed only by competent personnel using proper, well-maintained tools and accepted techniques.

Seek guidance from your veterinarian on the availability and advisability of pain control for disbudding or dehorning beef cattle.

Disbud calves as early as practically possible, while horn development is still at the horn bud stage (typically 2-3 months).

Use pain control, in consultation with your veterinarian to mitigate pain associated with dehorning calves after horn bud attachment.

Castration must be performed by competent personnel using proper, clean, well-maintained instruments and accepted techniques.

Seek guidance from your veterinarian on the optimum method and timing of castration, as well as the availability and advisability of pain control for castrating beef cattle.

Castrate calves as young as practically possible.

Use pain control, in consultation with your veterinarian, when castrating bulls older than nine months of age.

Effective January 1 2018: Pain control is used, in consultation with your veterinarian, when castrating bulls older than six months of age.

Beef cattle must not be tail docked unless on the advice of a veterinarian.
Euthanasia or Putting an Animal Down

- An acceptable method for euthanizing cattle must be used and done by competent personnel. (see Table 6.1 in Beef Code of Practice).
- Equipment used for euthanasia, such as guns or captive bolt devices, must be maintained according to manufacturers’ instructions to ensure proper function.
- Be prepared to immediately deliver a second application should the first attempt not render the animal immediately insensible.
- Non-ambulatory cattle may not be dragged or forced to move prior to euthanasia.
- Death is confirmed before moving or leaving the animal, and confirm insensibility by touching the eyeball and note if the animal blinks (corneal reflex). An insensible animal will not blink.
- Confirm death via a lack of heartbeat and respiration:
  - Evaluate heartbeat by physical palpation or by placing a stethoscope over the left lower chest area of the animal, just behind the elbow.
  - Evaluate respiration by observing the chest for any breathing movement. Note that breathing may be slow and erratic in an unconscious animal.
- Monitor the behaviour of newly-arrived feedlot cattle to facilitate the early detection of illness.
- Have a disease prevention strategy for new arrivals into a feedlot.
- Provide appropriate care, convalescence or treatment for lame cattle without delay.
- Monitor the animals’ response to therapy or care and, if the initial treatment protocol fails, then reassess treatment options or seek veterinary advice.
- Promptly cull or euthanize lame cattle that have a poor prognosis for recovery, or that do not respond to therapy or care.
- Design, implement, evaluate and adjust the feeding program to reduce the risk of nutrition-induced disorders, and consult a veterinarian or a nutritionist when needed.
- Transition cattle from high-forage to high-energy rations gradually to avoid abrupt dietary changes.
- Bullers are promptly removed from their pen or otherwise dealt with.
- A veterinarian is consulted to develop a program for managing pregnant heifers. Appropriately manage animals that calve and provide appropriate care for the calf.
- Feedyards and backgrounding lots with 5,000 head and over must have a written plan to deal with non-ambulatory and downer animals. It is highly recommended that lots smaller than 5,000 head capacity have a written plan.
- Feedyards over 5,000 head will complete a cattle handling assessment as part of a validation audit at a frequency to be determined.

Feedyards and Backgrounding Lots

- Monitor the behaviour of newly-arrived feedlot cattle to facilitate the early detection of illness.
- Have a disease prevention strategy for new arrivals into a feedlot.
- Provide appropriate care, convalescence or treatment for lame cattle without delay.
- Take steps to prevent exposure of cattle to toxins (such as: lead batteries, fertilizer, treated seed, antifreeze, nitrates) and to avoid feed with adverse physical qualities that could cause injury or limit intake.

B. CATTLE FEEDING AND WATER

- Monitor cattle behaviour, performance, body condition score and health on an ongoing basis and adjust the feeding program accordingly.
- Ensure cattle have access to feed of adequate quality and quantity to fulfill their nutritional needs at all times, and maintain proper body condition, taking into account factors such as: age, frame size, reproductive status, health status, level of production, competition and weather.
- Take prompt corrective action to improve the body condition score of cattle with a score of 2 or less (out of 5).

PROGRAM REQUIREMENTS

| Feedyards and backgrounding lots with 5,000 head and over must have a written plan to deal with non-ambulatory and downer animal. |
Water Sources

- Ensure that cattle have access to palatable water of adequate quality and quantity to fulfill their physiological needs. Monitor water sources, feeding habits, behaviour, performance and health on an ongoing basis and be prepared to adjust the watering program accordingly.
- Snow may only be used as a sole winter water source providing it is of sufficient quantity and quality to meet the animals’ physiological requirements. Snow must not be used as a sole water source for lactating, newly-weaned cattle or those with a body condition score of less than 2.5 out of 5, or that don’t have access to optimal feed resources.
  - Only adequate quantities of clean, loose snow may serve as the sole water source. Monitor snow conditions on an ongoing basis.
  - A back-up water source is available in the event of insufficient loose snow or an interruption in water supply.

C. SHIPPING AND TRANSPORTATION

Transporters must follow the most current federal and provincial animal transport regulatory requirements.

- Cattle must be transported by competent personnel (through training, experience or mentorship) using safe, well-maintained equipment.
- The right of the transporter to refuse to load cattle as unfit for transport must be respected. The reason for refusal must be addressed.
- Cattle producers and transporters must immediately report instances of inhumane handling to proper authorities.
- Do not load or unload livestock in a manner that is likely to cause injury or undue suffering. Cattle must be able to stand in a normal posture without coming into contact with the roof or upper deck of the vehicle.
- Cattle that arrive unable to rise and walk unassisted (non-ambulatory cattle/downers) must be examined on arrival and their likelihood of recovery assessed. Cattle must not be dragged from the vehicle while conscious; they must be humanely stunned or euthanized on the vehicle prior to unloading. Once unloaded, a stunned animal must be immediately confirmed dead or euthanized. If an animal is likely to recover, it may only be unloaded for veterinary treatment under the advice of a veterinarian.
- Segregate cattle that are incompatible by reason of their nature, temperament, sex, weight or age.
- Ensure that cattle have proper ventilation, are protected from extreme weather such as extreme cold, windchill or extreme heat.
- Provide safe and secure footholds (footing) or adequate bedding to prevent cattle from slipping and falling.

D. NEGLECT OR ABUSE IN OTHER OPERATIONS

Occasionally there may be practices of others in the locality that result in neglect of cattle, starvation or abuse. While this may be highly unusual, for the welfare of the cattle it might be necessary to contact a local expert or others outside the region to carefully investigate. Incidences must be dealt with on a case-by-case basis and should be considered as protection for the animals.
Knowing the signs of disease and managing sick animals as soon as possible assists in animal health and potential of further disease transfer. Veterinarians are an excellent source of advice on treatments, disinfectant use, and the use of vaccines to prevent illness. A record on animal health treatment, vaccinations and deaths/euthanized cattle must be kept so that disease management success may be evaluated over the longer term. The existing VBP sample records offer a suggested format for these records, which can be adapted to the operation's record-keeping. Alternatively computerized animal health software can track this information. Other practices that help manage against disease transfer:

- Isolating incoming replacement cattle for a time period before introduction to herd; similar practices for 4-H or show cattle returning home.
- Doing the same as above for a foster calf or dam, purchasing from a herd with known animal health status, and keeping them separate from the herd.
- Keeping a record of incoming cattle purchases, and sales/shipping of cattle out from the operation including date and trucker/company information.
- Consider single use needles for sick and suspect animals.
- If using comngled pasture, consider vaccination and bull testing policies.
- When visiting a vet clinic or auction mart, consider using different footwear or outerwear, or disinfect prior to coming back to own operation.
- Cattle are not exposed to raw human sewage pump out or sewage storage/lagoons. Access is protected from cattle.

Beef biosecurity practices also protect the national beef herd as all operations work against disease introduction from other countries. That is achieved through appropriate visitor control and by not bringing in food and other prohibited products to Canada.
B. COMMUNICATION AND TRAINING

Persons undertaking animal health and shipping on the operation are aware of potential biosecurity concerns specific to that operation. A visitor policy could include clean outerwear, visitor instruction signage, and farm worker policies to assist against transfer of disease.

Custom equipment or borrowed machinery should be clean and not carry dirt or manure before going into pens or other areas where animals are housed.

Persons working on the operation should know the signs of diseases that are reportable, and where to find further information. Livestock managers know who to contact in case of a disease emergency.

Visitor Actions

- Persons visiting or returning from international travel in rural areas with livestock take precautions, including complete clothing/footwear change and cleaning or disinfecting materials before entry back to cattle operation.

C. REFERENCE (Canadian Beef Cattle On-Farm Biosecurity Standard: Summary)

Manage and Minimize Animal Movement Risks

Manage commingling:

- Segregate and, when warranted, vaccinate, test, and otherwise treat, incoming animals.
- Obtain and share information about commingled animals with previous and future owners.
- Minimize contact with animals of other species and from other operations to the extent possible.

Manage movements of high-risk and highly susceptible animals:

- Manage and minimize movements of, and contacts with, high-risk and highly susceptible animals.
- Use or request clean trucks for movement of highly susceptible animals.
- Consult with your veterinarian before leaving or after returning to your operation, if in contact with livestock outside of the country.
- Ask questions of incoming visitors prior them arriving on the premise:
  - Have they been outside Canada in previous two weeks
  - Have they been on farm/ranch with livestock outside Canada and USA
  - Have they been exposed to a reportable animal health disease in past 6 months

Manage the Movement of People, Vehicles, Equipment and Tools

- Apply sanitation practices that are relevant to personnel, visitors, vehicles, equipment, and tools on entry to, within, and on exit from production areas.
- Minimize the use of the same equipment for both “clean” and “dirty” tasks.
- Ensure production area perimeters are sufficient to contain livestock, with access points that can be closed to prevent access by people, other than deliberate non-compliance.
- Post biosecurity signs at access points to production area and farmyard.
- Manage and dispose of deadstock and manure to minimize contact with live animals.
- Minimize pests to reduce exposure to livestock to the extent practical.
- Manage livestock to reduce exposure to wildlife to the extent practical.
- Ensure facilities are maintained and clean.
Manage Animal Health Practices

- Establish and maintain a working relationship with a veterinarian.
- Manage herd health according to a documented herd health plan, prepared in consultation with a veterinarian.
- Obtain water, feed, medications, and other inputs from safe and reliable sources, and manage or store these resources to ensure their ongoing safety and efficacy.

Educate, Plan, Record

- Ensure that personnel understand how and why biosecurity is applied on their operation.
- Develop, document, and maintain a biosecurity plan that is specific to the needs of the operation.
- Ensure that personnel know how to respond to the range of animal health situations typical to the operation.
- Ensure that personnel know how to respond to an unusual animal health situation.
- Maintain ongoing records for animal health management (see VBP on-farm food safety sample records)

The VBP+ program requirements were developed using existing producer resources, including:

Code of Practice for the Care and Handling of Beef Cattle 2013
www.nfacc.ca

Canadian Beef Cattle On-Farm Biosecurity Standard
www.cattle.ca
ENVIRONMENTAL STEWARDSHIP

Many beef cattle operations and feedyards have completed an Environmental Farm Plan to manage potential risk and can describe many practices beneficial to their local ecosystem. Optimally managed cattle grazing systems improve soil conditions including building soil capacity to filter and hold water, build organic matter and enhance growth of beneficial microorganisms. Grasslands sequester carbon and also provide habitat for over 1,000 species of plants, animals and insects.

Many practices have evolved to assist building soil capacity and include feedgrains grown under minimum till and other conservation harvesting practices. In addition to these agronomic practices, confined feeding operations are subject to provincial regulations that cover manure or nutrient management, water runoff control, deadstock management and building requirements to manage and protect water resources.

Many feedlots have worked with their local county and municipal authorities to ensure local conditions are met or exceeded.

The following summarizes practice areas to manage risk and enhance beef cattle production's beneficial effect on natural resources and inter-dependent practices. Beef cattle operations are expected to manage risks to soil, water and air in a responsible manner and ensure staff and family members understand tasks relating to these practices. In addition it is expected that operations meet applicable local, municipal, provincial and federal environmental regulatory requirements.

A. LAND MANAGEMENT AND CONSERVATION

Regional environmental farm plans provide an excellent base for land and water stewardship, and the VBP Plus audit will review practices with operations on how risks and benefits are managed. In addition some beef cattle operations have participated in a local watershed or group environmental plan to assist regional management of soil and water resources. Producers utilize many grazing management techniques, participate in training and follow expert studies/research to enhance land use, conservation and management of resources.

Grazing Management

Beef cattle operations match cattle and grazing land needs as appropriate to local conditions, which includes past grazing effects and weather conditions. A system of pasture rotations provide the underlying management for optimum opportunity for plant re-growth. Tools may include cross-fencing, intensive rotational grazing, pasture or rangeland assessment, and fragile lands left in natural grassland or re-seeded to tame grass and forages. Grazing management training and accessing crop experts for optimum rotations are all practices that contribute to efficiency of use.

Managing grazing land during drought or high rainfall/flood conditions can demand further refinement in practices. While specific to local conditions, practices may include longer rest periods, tiling and other erosion management action. Shelterbelts and supplementary feeding may assist as well, so that some consideration is given to avoid further damage to grazing areas and lands.
In addition producers are considering and trying innovative action that further contribute to carbon sequestration, for example woodlands and permanent cover.

In some regions there is the potential for the spread of invasive plants that can impede the growth of grass and forages, reduce riparian area utility, or choke out the multi-species to the point that grazing opportunities are reduced. Producers need to be aware of potential invasive plant species and manage as appropriate to avoid introduction or work against the spread of these species. This may include specific herbicide use, insects or multi-species grazing, and careful selection of hay or forage seed brought to the operation to avoid further spread.

**Cattle and Riparian Areas**

In some regions or locales there are required or highly recommended practices to limit access to streambanks or flowing water by cattle. This may be to protect water resources and limit influence of manure on marine life or downstream users. Producers must be familiar with regional and provincial requirements as it applies to protection of riparian areas. The goal is to protect the water resource and surrounding riparian area against potential run-off or erosion that could unduly affect the water resource.

Beef cattle operations may fence off or otherwise limit access to water that runs into a watershed. This could include off-site watering, vegetative ground cover, buffer strips, berms, gravel ramp crossings, and other practices. An operation’s practices depend on local conditions, depth to groundwater and applicable regulatory requirements.

**Wintering Grounds for Cow/Calf Operations**

Many beef cattle operations have moved to wintering outside of the traditional winter corrals to reduce the need to clean pens and reduce diesel consumption. This results in moving manure grounds to benefit the soil, pasture and crop lands. Producers need to consider the build-up of too much manure and rotate wintering grounds as necessary. This may include the use of temporary fencing, windbreak panels, bale grazing and other practices to move bedding grounds around a pasture(s). In some provinces or regions wintering grounds are not permitted near water bodies and operations are expected to meet these requirements. Actions taken should not negatively affect water and soil resources.

In warmer regions where high rainfall and high water tables exist, cattle are confined to barns and/or a confined yard during winter months to avoid damage to pasture and land via compaction.

**Wildlife Habitat**

Many of Canada’s grasslands provide ample habitat for wild mammals, reptiles, birds and insects. Practices that enhance grazing, soil health, riparian areas and associated beneficial practices at an individual operation facilitate habitat for wildlife. Healthy grasslands as per discussion earlier in this chapter contribute to benefits for wildlife. A beef cattle operation particularly with grazing lands and natural water bodies, offers feeding opportunity for many kinds of wildlife and growth of a diversity of plant species. Wildlife and cattle regularly inter-graze including species of ungulates, raptors, rare birds, migratory animals, reptiles and unique plant life. In addition there may be specific species-at-risk practices undertaken within overall land management.

On occasion wildlife may over-populate and actions are required to mitigate so that over-grazing is managed. Operations are expected to utilize actions that limit over-kill and are acceptable to provincial wildlife management approaches and regulations. Many producers work with wildlife specialists to ensure a multi-faceted approach. Mitigation action should not unduly affect other wildlife or water resources.
Manure Storage and Use

Manure is stored and used in a manner that benefits the soil and manages against excessive leaching of nutrients into water bodies and groundwater.

Feedyards or confined feeding operations are designed and maintained as per provincial regulation via specific licensing or permits. This includes design and management of manure for optimum protection from run-off and drainage into water resources, and may include berms, sloping of pens, catch ponds and other design practices. Manure is stored in a manner that also protects against leaching into groundwater, according to local and provincial regulation. Feedyards are expected to maintain provincial permits for practices related to intensive livestock operations.

Manure and/or nutrient management plans include use of manure that is beneficial to soil and cropping enterprises. This includes timing, method of incorporation into land, amount, consideration for sloping, soil type, set-back distances from water and adjustments as per other local consideration.

PROGRAM REQUIREMENTS

Manure is stored and used in a manner that benefits the soil and manages against excessive leaching of nutrients into water bodies and groundwater.

Deadstock

Deadstock is disposed of in a manner that avoids leaching into water bodies as per provincial regulations. Acceptable methods may include burial, incineration, composting, or controlled scavenging but varies by region.

Confined cattle feeding operations are required to meet provincial regulatory requirements for disposal, and manage burial sites or composting with separation distances from water as per each province. Rendering and deadstock pick-up may be available in some regions.

PROGRAM REQUIREMENTS

Deadstock is disposed of in a manner that avoids leaching into water bodies.

Annual Crops and Feedgrains

Crop production may include crops for feed usage and those crops salvaged for feed during drought or flood conditions. Agronomic practices include application of nutrients according to crop and soil need, and managed in a manner that nutrients do not leach into water bodies. Minimum till or other soil conservation practices assist with building soil capacity. This may include use of no-till, crop rotations, harvest residue management, forage rotations and use of soil additives. In addition other practices identified within an Environmental Farm Plan assist in managing risks to soil or water.

In many regions pesticide applicators take specific training to ensure appropriate practices are followed.

Irrigation water is managed according to local requirements and efficient practices are employed wherever possible. Water for irrigation is sourced and used according to municipal and provincial requirements.
B. STORAGE AND DISPOSAL OF PETROLEUM PRODUCTS, HERBICIDES AND PESTICIDES

This refers to the storage, use and disposal of petrochemicals used in equipment operations, herbicides and pesticides, fuel, lubricants and solvents. Beef cattle operations are expected to store, use and dispose of these products and material in a manner that does not contaminate soil or water.

- Storage of petrochemicals, fertilizer, herbicides, treated seed and cropping chemicals may be subject to municipal and provincial regulations including management of run-off from storage. Practices may include separation, use of double-walled fuel storage, cement pads and berms to assist against leakage into water bodies.
- Producers also dispose of containers, old batteries, ag plastics and other refuse as per local availability of disposal sites and as regional refuse collection programs are available. Some material is recycled and used for other purposes at the operation, or as per the operation’s environmental farm plan.
- Disposal sites and other refuse on farm is dealt with as appropriate.

Chemical spills and other emergencies - knowing what to do

During normal operations there is potential for leakage of fluids from equipment in farm shops and yards. Beef cattle operations are expected to know how to handle unwanted spills and have material available to clean up or manage as appropriate. This may include absorbent pads or material such as cat litter, dirt, sawdust, sand or other material.

Protective gear is available for use by family members or employees, and people know what to do as appropriate. Fire extinguishers, first aid kits, and an emergency contact list helps prepare for this action. In addition gear such as safety boots, protective head gear or outerwear is available where needed. People know what to do and/or who to call for help when needed.

Seeking advice when need to.

On occasion there may be practices of others that can affect a local watershed or potentially add unwanted substance to air or soil near the cattle operation. While this may be highly unusual, there is potential for a possible concerning incident to affect agriculture production in a local region. It may be necessary to contact a local expert or others outside the region to carefully investigate. This “duty to report” is on a case-by-case basis. It should be considered to protect land, wildlife, livestock and water resources.

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<td>Beef cattle operations are expected to store, use and dispose of these products and material in a manner that does not contaminate soil or water.</td>
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C. INNOVATION: ENERGY EFFICIENT PRACTICES AND PRODUCTION EFFICIENCIES

The use of alternative energy sources and practices that increase energy efficiency use is employed at many beef cattle operations. This may include solar or wind power devices, energy efficient heating and lighting, fuel saving tools or practices, recycling water, and other innovations. Re-use, reduce and recycle is important to all practices.

In addition improving production efficiencies through effective combination of beef cattle genetics, feedyard practices that reduce days on feed, and use of other tools that increase production are employed. Beef cattle operations will be asked to describe these types of practices that assist production efficiency. New research may provide further actions that can be used to improve carbon sequestration and greenhouse gas mitigation.

D. MANAGING AIR QUALITY

Confined cattle operations during dry months or heavy traffic season may manage against dust by periodic application of materials such as calcide or water. While not a particular environmental risk, this assists avoiding nuisance complaints and potentially improves working conditions for employees.

Burning of crop residue may be allowed in some areas, and applicable burn permits or notification is expected as per municipal bylaws. Protective gear is provided for employees as necessary.

E. OTHER

Management of water wells includes the consideration of potential leakage into local groundwater via well heads, and may require capping or sealing of abandoned wells. As per the provincial environmental farm plan, wells are managed to avoid potential contamination wherever possible. Some cattle producers also protect existing wells with fencing or other methods to avoid inadvertent damage to the well head and resultant draining of unwanted material into the water well.
SOP 1  Animal Health Management

- Store animal health products according to label directions.
- Record all individual animal or group treatments on a permanent record, including deaths/euthanization.
- Use all products according to label directions, or in the case of extra-label use, according to a written veterinary prescription.
- Securely restrain cattle to avoid potential bent or broken needles.
- Make sure syringes and other equipment deliver the intended amount of product.
- If a broken needle occurs, identify the suspect animal and record on a permanent record. If the animal is being sold, the next owner must be informed of the broken needle in the specific animal.
- If treating with the wrong product or dosage, identify the animal, record the incidence, contact a veterinarian and record actions taken.
- Those undertaking cattle tasks understand requirements of Beef Code of Practice 2013.
- Castration and dehorning is done as early as possible. Pain control is used with dehorning after horn-bud attachment, and for bulls castrated older than 9 months of age as per advice from veterinarian.
- Pens or indoor housing allows for drainage and comfortable, dry resting areas. Pens are not over-crowded.
- Castration of belly nuts is handled by trained persons with pain control.
- People are mentored on handling cattle and abuse/neglect is not tolerated.
- Feedlots 5,000 head and over follow a written plan to manage non-ambulatory/downer or injured cattle.
- Keep a copy of any written veterinary prescriptions used within the last two years.
- Euthanization is done in a timely manner with an acceptable method and by competent personnel.
- Branding is done by a knowledgeable person with appropriate equipment.
- Shelter is available in case of inclement or extreme weather.
- Feedlot staff know what to do if a feedlot animal calves and attention is provided.
- Cattle are monitored for illness and injury on a regular basis.
- Persons visiting or returning from international travel in rural areas with livestock take precautions, including complete clothing/footwear change and cleaning or disinfecting materials before entry on to cattle operation.
- Feedlots over 5,000 head will complete a cattle handling assessment as part of an on-farm validation audit at a frequency to be determined.

SOP 2  Feed and Water: Medicated and Non-Ruminant Feed

- Wood chips or wood shavings used for bedding contain no preservatives or other chemicals.
- Feeds containing prohibited material (ruminant by-products) are not fed to beef cattle.
- Cattle have not had access to non-ruminant feed (poultry, hog, horse, pet). If so, CFIA is contacted.
- All non-ruminant feed is stored separately and clearly labeled to avoid inadvertent feeding to cattle, or cross-contamination with ruminant feeds.
- Those feeding cattle know what to do in case of power outage or feed equipment failure.
- Cattle are fed according to nutritional needs and have access to palatable water or snow as appropriate.
- Feedlot rations are formulated in step-wise manner to allow for cattle adjusting to feed changes.

SOP 2 - Part 2 (only for operations with Medicated Feed or Water)

- Copies of written and signed veterinary feed prescriptions are available for all extra-label use of feed or water medications.
- Feed delivery person is informed of unloading requirements for medicated feed or ingredients, including intended storage area or bin.
- Delivery of medicated ingredients or medicated feed is cross-checked with ration or prescription.
- Medicated ingredients and medicated feed have a separate and clearly labeled storage area or storage bins.
- Equipment used for medicated feed or water is cleaned, flushed or a system of sequencing is used to avoid cross-contamination of non-medicated feed.
- Scales used to mix medicated feed are tested for accuracy at least once per year.
- Staff and/or family members understand mixing and feeding procedures for medicated feed and what to do if an error occurs.
- Medications are mixed according to label directions and documented ration. Actual amounts mixed are recorded.
- A system is in place to avoid delivery of medicated feed to unintended cattle.
- Reprocessed or flushed feed is used or disposed in a manner to prevent contamination of other feedstuffs.
- Cattle pens are clearly identified to ensure medicated feed rations are delivered to the right cattle.
- Medicated feed or water is fed according to label directions or written veterinary prescription.
- Amount of medicated feed fed per pen or group is recorded (see sample record).
SOP 2 - Part 2 - continued.

- If medicated rations or water are fed to the wrong cattle, record the incidence and actions taken.
- Separate equipment is used for receiving (ie. auger), mixing and feeding non-ruminant feed to prevent cross-contamination of cattle feed.
- If feed is mixed with the incorrect amount of medication or wrong product, record the incidence, consult a veterinarian and record actions taken.

SOP 3  Cattle Shipping

- A records check for all drug withdrawal requirements and broken needles is completed before cattle are shipped to slaughter.
- The check for drug withdrawal requirements and broken needles is identified in a record including date.
- If cattle are being shipped or sold other than directly to slaughter, and they have not met their drug withdrawal times, then the next owner is informed.
- Persons handling cattle understand when/how electric prod can be used. Stock dogs not used in case where cattle not able to move forward.
- Extra traction is provided in loading and processing areas for avoidance of slipping.
- If cattle contain a broken needle, next owner is informed including identification of the animal.
- If cattle are inadvertently shipped without meeting withdrawal times, next owner or slaughter plant is informed and this contact date/information is recorded.
- Those making shipping decision or loading know what is not acceptable cattle to load or transport.
- Trucks transporting cattle are ventilated and protection from extreme weather is provided.

SOP 4  Pesticide Control and Manure

- Manure is stored and used in a manner that benefits the soil and manages against excessive leaching of nutrients into water bodies and groundwater.
- Herbicides, pesticides, solvents, treated seed and petrochemicals are stored, used and disposed to avoid contamination of cattle feed or water.
- Pens holding cattle destined for slaughter are subject to manure removal at least once annually.

SOP 4 - Only if operation uses crop protection products

- Herbicides and pesticides used on pasture or hay fields within the operation are applied according to label directions and usage is recorded.
- Records regarding herbicide use on pasture are checked before cattle are allowed access.
- If a potential cattle exposure has occurred, an expert (eg. veterinarian or toxicologist) is contacted for recommended procedures or actions. Actions taken are recorded.

SOP 5  Training and Communication

- One person in the beef cattle operation has been trained in the VBP Plus program, and is updated on any new requirements as needed.
- Family members and/or staff understand their tasks relating to SOPs and Must Do requirements of the VBP Plus program. If mistakes happen, communication takes place.
- Someone is designated from your beef cattle operation to review “Must Do” VBP Plus requirements each year.
- Cattle operation has designated person to manage or mentor human resources.
- If someone is neglecting cattle in an outside operation, appropriate communication with experts takes place if needed.
- Cattle operation reduces waste, re-uses and recycles products/materials as is feasible.
- Information is recorded if problems or errors with the Must Do requirements, including actions taken.
- Employees are treated with equity/respect, and safe and healthy working conditions exist. Staff/family members are trained or mentored on what is expected.
- Livestock managers know who to contact in case of a disease emergency.
- It is recommended operations share aggregate information to BIXS or other means, so that members of beef value chain may use for sourcing claims.

SOP 6  Land Management and Conservation

- Grasslands and grazing are managed in a way that improves soil health and protects watershed and riparian areas.
- Grasslands and other areas provide habitat for wildlife.
- Cattle operation’s environmental farm plan provides awareness for stewardship and conservation practices.
- Cattle do not have access to raw human sewage.
- Cattle operations manage beneficial practices and any risk to soil, water and air in a responsible manner. Family and staff understand tasks relating to responsible practices.
- Operations seek to conserve energy, improve production efficiencies, adapt research and other innovation that assist stewardship of land and resources.
- Manure and soil nutrients are managed responsibly.
- Deadstock is disposed in a manner that avoids leaching into water bodies.
- Wintering grounds for cowherds are managed to avoid excessive manure build-up and run-off into water bodies.
- Invasive plant species are managed as appropriate.
- Practices are considered where proven to enhance carbon sequestration and/or mitigate greenhouse gas.
- Irrigation water is managed responsibly/efficiently.