KNOW ABOUT YOUR RESPONSIBILITY FOR DISEASE PREVENTION

All cattle owners, producers and handlers are responsible for providing humane care for their animals and making every effort to obtain veterinary care for animals that are ailing, sick or injured.

Many health issues can be managed effectively if they are identified early. Cattle owners can then prevent or minimize the spread of problems to the rest of the herd.

What does the Code of Practice for the Care and Handling of Beef Cattle say about disease prevention?

Pain and discomfort caused by health issues impact an animal’s well-being such that good animal welfare requires good animal health. Disease prevention is extremely important. Herd health management and biosecurity protocols can help prevent and contain diseases. Producers need to be able to promptly recognize and treat animal health issues in order to optimize animal welfare.

Veterinarians play a key role in helping producers meet these animal health obligations. Although the specific regulations vary among provinces, in order for veterinarians to prescribe some classes of medications and vaccines, they must have a valid veterinarian/client/patient relationship (VCPR).

The following requirement is identified in the Code of Practice.

Establish an ongoing working relationship (VCPR) with a licensed practicing veterinarian and develop a strategy for disease prevention and herd health.

More detailed information about the conditions of a Veterinarian/Client/Patient Relationship is provided in the Code of Practice for the Care and Handling of Beef Cattle at www.nfacc.ca/pdfs/codes/beef_code_of_practice.pdf.

Things you need to know about livestock production practices.
This recommended practice is also provided in the Code of Practice.

a. Maintain accurate animal management and health records.

What does the Code of Practice for the Care and Handling of Beef Cattle say about sick, injured and cull cattle?

More frequent monitoring of cattle may be necessary during weather that may compromise animal welfare, calving and post-weaning periods, and when multiple stressors occur simultaneously (e.g., weaning, transportation, commingling, etc.). Adequate monitoring ensures timely detection and treatment of sick or injured cattle. Treatment may vary from therapeutic interventions to convalescent care. Some examples of convalescent care may include, but are not limited to, segregation, easier access to feed and water, reduced competition and increased monitoring.

Be aware that cattle may hide their expression of pain or suffering, and that this may affect your assessment of their condition in making decisions about treatment or euthanasia.

Cattle owners, veterinarians, and laboratories are required to immediately report an animal that is infected or suspected of being infected with a reportable disease to a Canadian Food Inspection Agency (CFIA) District Veterinarian. Reportable diseases are listed in the Health of Animals Act and are usually of significant importance to human or animal health or to the Canadian economy.

LINK
The Health of Animals Act can be accessed at www.laws.justice.gc.ca/eng/acts/H%2D3.3.
The following requirements are identified in the Code of Practice.

**Monitor cattle 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 (or cull) 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
- Show continuous weight loss or emaciation.

These recommended practices are also provided in the Code of Practice.

a. Consult a veterinarian to address new, unknown, or suspicious illness or death losses.
b. Consult a veterinarian if the incidence of a known illness suddenly increases.
c. Consult a veterinarian for the most appropriate treatment options when an animal is sick.
d. Monitor the progress of treated cattle.
e. Dispose of dead cattle according to applicable provincial/municipal regulations.

**KNOW ABOUT PESTS**

Pests can cause a range of problems for beef cattle. These problems can include:

- Slow growth
- Inadequate weight gain
- Infection
- Damage to the hide
- Swelling, skin irritation and itching.

**DO YOU KNOW**

About basic treatments for pests? If you think you need to know more about appropriate procedures such as dusting, go to How to administer basic treatments in this inquiry topic.

**LINK**

Watch the How to treat pests, disease & ailments video on the Virtual Apprentice 2040: Livestock1 website at [www.etsanimals.ca/va2040/production.html](http://www.etsanimals.ca/va2040/production.html) for more information on external pests and parasites.

Management of waste is the first step in pest management. Moist manure should be removed weekly. Regular monitoring of cattle is also an important practice for pest management.
### Common Cattle Pests

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<th><strong>Cattle grubs</strong> can lay eggs on a hair on the lower part of the body. Young cattle are more susceptible than older cattle. They can cause bloat, paralysis and excessive salivation. They can be controlled with insecticides.</th>
<th><strong>Face flies</strong> feed on the secretions of the eye and muzzle and can cause tear production and swelling of the eye. Face flies can be controlled with multiple applications of ear tags or tape and dusting bags. Treated cattle can be infected again.</th>
<th><strong>Cattle lice</strong> can cause loss of flesh, stunted growth and anemia. Fall and spring calves, yearlings and older cattle usually are the most susceptible. Lice can cause reduced weight gain, rough and patchy hair and poor health. Cattle may show signs of scratching, leaving hair on barbed wire fences. Insecticide dust bags can be used to control lice.</th>
<th><strong>Scabies, or mites</strong>, can attack any part of the body, especially areas of thick hair. They cause skin lesions, stress and discomfort and can transmit diseases.</th>
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<td><strong>Black flies</strong> are a major pest of beef cattle in parts of Alberta. The females bite, usually around the ears and head. Their bites can result in swelling, skin irritation, nausea and loss of weight. They are difficult to control, but breeding sites can be treated.</td>
<td><strong>Horn flies</strong> lay eggs in fresh manure. The flies are found on the neck, throat, belly, thighs, back and the base of the horns. Bits can cause weight loss and reduced vitality, or strength and energy. Cattle may become so annoyed that they injure themselves trying to remove the flies. Horn flies can be controlled with spray, dusting, dipping and ear tags.</td>
<td><strong>Stable flies</strong> feed on blood and often bite while cattle are in the shade around a building or under a tree. Their eggs are laid in decaying organic material like wet straw, manure in straw, spilled feed, silage or grass clippings. Feet stamping is a sign that stable flies are biting. A biological control method, such as parasitic wasps that feed on larvae, can help control outbreaks of these flies.</td>
<td><strong>Biting flies</strong> can cause stress and discomfort to cattle. They can spread quickly from untreated areas and infest cattle. They can also transmit disease while feeding.</td>
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**Need To Know:** How to deal with pests, ailments & disease in beef cattle

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KNOW ABOUT RESPIRATORY DISEASES

**Bovine Respiratory Disease** (BRD) is the most common and costly disease affecting the North American beef cattle industry. In the broadest sense, BRD refers to any disease of the upper or lower respiratory tracts. Bovine Respiratory Disease is commonly associated with infections of the lungs causing pneumonia in recently weaned and feedlot cattle, nursing beef calves, housed dairy calves and lactating dairy cows.

Classical clinical signs of bacterial Bovine Respiratory Disease include:
- Fever of over 40°C (104°F)
- Difficulty breathing occurred to varying degrees
- Nasal discharge
- Varying degrees of depression, including drooping ears, extended head or bowed back, reluctance to exercise or move and a tendency to isolate from other cattle
- Diminished or no appetite or "off-feed."

**Lameness** is leg or foot pain that affects how cattle move. There are many different kinds of lameness, with many different causes, such as genetics, environment, injury, nutrition and a variety of infections. Lameness can negatively affect both animal welfare and growth performance, because animals may be reluctant to eat or drink if standing or walking is painful.

- Lameness is rare in healthy cattle.
- Lameness is more common in unhealthy cattle.
- Lameness is also more common in older cattle.

Western Canada’s transport survey also reported that lameness was considerably more common in market cows than in fed cattle, feeders or calves.

Four common causes of lameness include:

1. **Genetics** (e.g., bad conformation, corns, corkscrew claw, puffed hock)
2. **Nutrition** (e.g., laminitis, sole ulcerations, double sole, bruised sole, heel erosion, white line disease, toe ulcers)
3. **Infection** (e.g., footrot, infection of the coffin joint, interdigital dermatitis, infectious arthritis)
4. **Physical injury** (e.g., broken leg, frostbitten feet)

Lameness may have multiple causes. For example, when cattle that tend to be excitable (genetic), scramble on hard flooring, they may damage the sole of the feet (injury), allowing bacteria to enter and settle in the foot (infection). This is one theory to explain **P3 necrosis**, also known as "toe necrosis."

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**DO YOU KNOW**

DO YOU KNOW how housing design can prevent respiratory disease? If you need to know about light, air and ventilation, go to **Beef cattle requirements for light, air & ventilation** in this inquiry topic.

If you think you need to know more about healthy housing environments that avoid ailments and disease, go to **Housing & fencing structures for beef cattle** in the inquiry topic. **Know livestock housing & equipment** on the Virtual Apprentice 2040: Livestock1 website at www.ctsanimals.ca/va2040/environment.html.
KNOW ABOUT NUTRITIONAL DISORDERS

**Bloot** is a common digestive disorder in beef cattle. It occurs most often in feedlot cattle but affects cattle in all production phases. It results when cattle cannot belch (eructate) or release gases produced normally from microbial fermentation in the rumen. The animal may produce more gas than it can eliminate. Rumen expansion from gases puts pressure on the diaphragm and lungs. This compression reduces or cuts off the animal’s oxygen supply and can suffocate cattle.

Cattle suffering from bloat swell rapidly on the left side and may die within an hour. Sudden death from bloat is frequently cited in feedlots as a cause of cattle losses. Cattle may show signs of discomfort by kicking at their sides or stomping their feet.

- Cattle should not be fed rich legume feed or on small grain pastures without first being provided with hay. Some legumes are non-bloating.
- Cattle should be slowly adapted from forage-based to grain-based diets over a period of at least three weeks.

**Acidosis** is often associated with a shift from a forage-based diet to a high concentrate-based diet or excessive consumption of fermentable carbohydrates. Acidosis may occur in cattle on high-grain diets.

Acidosis is the result of low rumen pH. The typical pH of the rumen on a forage-based diet is 6 to 7. As the amount of forage or roughage in the diet decreases and the amount of concentrate increases, the pH of the rumen falls between 5 and 6, depending on the forage to concentrate ratio of the diet. Low pH supports growth of lactic acid-producing bacteria.

Cattle may have diarrhea, dehydration and slowing or stopping of gut movement. Cattle with acidosis may not recover their level of feed intake. They may be weak, anorexic and uncoordinated.

Laminitis and liver abscesses often accompany acidosis. Liver abscesses are caused when low pH from acidosis creates lesions, or damage to tissues. Bacteria from the rumen that cause liver abscesses enter the blood supply and travel to the liver.


**Laminitis** is an inflammation of the hoof wall and is common in equines and cattle. It affects the general condition and health of cattle. Laminitis can be caused by overfeeding of grain, gastrointestinal problems, grazing of lush pastures and total weight bearing by one leg because the other is lame.

This condition usually occurs in the front feet. It is characterized by cattle placing most of their weight on the hindquarters with the forefeet extended forward. They can be unwilling to walk.

In the chronic stage, the bone loses its attachment to the wall and the sole drops. Distinct lines or ridges appear on the wall. In severe cases the coffin bone will rotate and come through the sole. A veterinarian should be contacted immediately.

**DO YOU KNOW**

enough about necessary nutrients for beef cattle and the impact of nutritional deficiencies? If you need to know more, go to How to adjust beef cattle feed requirements in this inquiry topic.
What does the Code of Practice for the Care and Handling of Beef Cattle say about nutritional disorders?

Nutritional disorders associated with high concentrate feeding include acidosis (grain overload), liver abscesses and laminitis. In most cases, acidosis is the predisposing factor to liver abscesses and laminitis.

Acidosis is the result of a complex interaction among meal patterns and quantity, diet fermentability, ruminal microorganisms and mechanisms of acid removal by the animal. Acute acidosis causes overt illness and is potentially fatal in cattle, while animals with sub-acute acidosis may not appear sick but have reduced or variable feed intake and weight gain.

The following requirements are identified in the Code of Practice.

Design, implement, and evaluate your feeding program to reduce the risk of nutrition-induced disorders, and consult your veterinarian or a nutritionist as needed.

Transition cattle from high-forage to high-energy rations gradually to avoid abrupt dietary changes.

These recommended practices are also provided in the Code of Practice.

a. Monitor feed bunks to assess prior consumption and adjust feeding accordingly.

b. Include forage of effective particle length in all diets to reduce sub-acute ruminal acidosis.

c. Consider adjusting rations to prevent digestive disorders when cattle feed intake is interrupted (due to storm, power outage, machinery breakdown, etc.).

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The process for the development of updated Codes can be accessed through the National Farm Animal Care Council at www.nfacc.ca/codes-of-practice.