

Emergency Response Procedures

NON-DISEASE RELATED EMERGENCIES



An emergency or disaster can place a tremendous strain on producers, animals, and the food supply chain. Outside of a foreign animal disease outbreak, livestock operations may experience damage and disruption from seasonal events and natural disasters.

While these challenges are difficult to predict, advance preparation can help safeguard the welfare of those involved, ensure business continuity, and encourage a speedy recovery after the unexpected event has passed.

This document has been developed to provide additional emergency guidance for producers and animal caregivers.

Contents

Structure Fire and Wildfire	2
Flooding	5
Power Grid and Utilities Failure	7
Severe Drought	9
Livestock Vehicular Transport Accident (Livestock Hauler)	10



Structure Fire and Wildfire

Fires can have a devastating impact on a farm. Whether it's a small area fire or uncontrolled wildfire, flames can spread across vast tracts of land, posing serious threats to livestock in barns, pens, and pastures.

STRUCTURE FIRES

- Farm buildings, sheds, and residences may be seriously impacted during a fire. These structures often contain materials such as wood, hay, and straw that can act as feedstock and further fuel the blaze.
- The ignition of a fire may be triggered by engine exhaust, exposed wiring, or lighting as well as other on farm heat sources such as combustion of bedding, litter, or hay. It is important to keep flammable materials away from heat sources and to be aware that high moisture levels in bales can contribute to excess heat, mold growth, and loss of dry matter. Fortunately, almost all structure fires are preventable. By being observant and practicing common-sense fire prevention techniques you can help reduce risks.

Considerations for Structure Fires

- Always have professionals perform all wiring and electrical modifications to barns, livestock housing structures and shops
- Prohibit smoking in and around barns
- Store combustibles (hay, shavings, manure, gas, oil, propane, paint, cutting torches, etc.) away from the barn
- Minimize the number of heat and electrical appliances in the barn that have the risk of sparking or causing fires
- Grain dust will ignite and explode. Do not try to auger grains during a fire
- Map the location of fire extinguishers, these should be in all barns, shops, and structures that have the potential to catch fire. Fire extinguishers should be easy to find within the structures, and all staff and family members should know where they are located and how to use them
- A structure can be completely engulfed in less than six minutes
- Panicked animals normally will not leave a barn on their own, because they do not fear fire
- Most animals are killed from smoke inhalation and those who do survive rarely recover
- Never put personal safety in jeopardy to save an animal



Species	Action
Horses	<ul style="list-style-type: none"> • Lead animals from the left-hand side • Horses are easier to control when blindfolded • A towel over the horse's eyes, secured under the halter works well to keep horses from running back into the barn
Cattle	<ul style="list-style-type: none"> • Try to move cattle in a group instead of one at a time • Beef cattle are commonly housed outside near or around a barn in groups. Move animals to a separate field away from the barn • Isolation greatly stresses the animals, and they will generally be more cooperative if moved together • Dairy cattle should be relocated to a protected area if the fire occurs in winter, as they cannot withstand extreme weather • Bulls can be extremely dangerous and only people familiar with them should handle them
Swine	<ul style="list-style-type: none"> • Pig barn fires are very challenging. If numerous pigs are in a barn, they will be almost impossible to evacuate • Pigs must be confined after removal from a barn, or they will attempt to run back into the burning structure
Poultry	<ul style="list-style-type: none"> • Due to the constraints and husbandry practices of poultry barns, the birds are almost impossible to evacuate • Virtually all poultry barn fires result in a 100% loss

Action Items During a Fire

- If possible, turn off all power sources to the barn, shop, or any other affected structures
- If the barn roof is on fire, do not enter the structure as there is potential for the roof to collapse
- All severely injured or burned animals must be humanely euthanized as soon as possible following provincial guidelines:
 - On-Farm Euthanasia Guidelines for Calves and Cattle
 - On-Farm Euthanasia Guidelines for Sheep and Goats
 - Practical Guidelines for On-Farm Euthanasia of Poultry
 - Pig Euthanasia – On Farm Options
 - Euthanasia of Horses

WILDFIRE

- Wildfires can spread across forests, grasslands, and fields at an astonishing rate. Farms near wildlands/ grasslands or owners that have livestock near these natural areas should be prepared for wildfires and know the steps to minimize risks and losses.

Preparation

There are several proactive measures that can be completed in advance to prepare producers for a wildfire emergency including:

- Having contact information for prearranged off-farm evacuation sites (lairage points) handy
- Reviewing wildfire history in area
- Identifying and maintaining equipment that may help fight an approaching grassfire or wildfire (e.g., disk, harrow, tractor, water truck)
- Reducing vegetation and wood debris within 10 to 30 meters of farm structures by thinning and pruning
- Creating firebreaks by clearing vegetation and exposing bare soil to help curb the movement of wildfire
- Mapping the location of fire extinguishers, these should be in all barns, shops, and structures that have the potential to catch fire. Fire extinguishers should be easy to find within the structures, and all staff and family members should know where they are located and how to use them
- Predetermining the location evacuation sites and routes that may be used for animal movement and have a map of the identified areas readily available for all staff, family and first responders
- Storing hay, straw, beddings/shaving outside the barn in a dry, covered area, if possible
- Having water and feed readily available or at the pre-arranged lairage site(s) to ensure that all affected livestock have sufficient feed and water
- Creating a detailed inventory of livestock and developing list of emergency contacts prior to any wildfire event
- If in a wildfire susceptible area, procuring and installing some type of irrigation/ sprinkler system to help suppress fire
- Preparing an evacuation kit that includes but is not limited to:
 - Supply of feed, supplements, and water for 7 to 10 days
 - Blankets, halters, leads, water buckets, feed buckets
 - Copies of vaccination records, medical records, and proof of ownership
 - Tools
 - Cash and credit card

Response

In the lead up to and during a wildfire emergency, producers will try to protect their farms and prevent losses. As you respond to the threat of wildfire consider the following:

- Evacuating employees/visitors to an agreed safe meeting place as required
- Notifying the fire authority immediately. In my area, the number is _____
- Assessing the fire and only attempting to contain or extinguish a small fire if it can be done safely

Flooding

Flooding is a natural and often seasonal hazard that can be extremely disruptive and can pose a threat to animal and human health.

The most common cause of flooding is rain and/or snow melt that accumulates faster than it can be absorbed into the soil, drainage, or water bodies. Not only can flooding cause immediate issues with rising water levels, but it can also disrupt services and create broader public health concerns.



By assessing the threat of flood and being prepared, producers can improve their readiness for an emergency. The risk of flooding will depend on the geographical location (e.g., proximity to creeks, streams, and rivers) as well as topographical features (e.g., drainage basins, low lying land, etc.).

Term	Description
High Stream Flow Advisor	<ul style="list-style-type: none">• River levels are rising or likely to rise rapidly, but no major flooding is expected• Minor flooding is possible
Flood Watch	<ul style="list-style-type: none">• River levels are rising and will approach or may exceed the banks• Flooding of areas adjacent to affected rivers may occur
Flood Warning	<ul style="list-style-type: none">• River levels have exceeded the top of the bank or will surpass it imminently• Flooding will occur in areas near affected rivers

Livestock tips during a flood

1. Unconfined animals can usually take care of themselves during a flood
2. The farmer's goal should be keeping livestock high and dry
3. Your local emergency coordinator can provide up-to-date flood information and forecasts

Preparation

There are activities that can be completed prior to a flood that will better prepare producers in the event of an emergency including:

- Reviewing local or provincial floodplain map and assessing flooding potential
- Identifying locations where livestock can be moved, on-site and/or off-site, including evacuation route
- Mapping out safe locations and routes
- Identifying livestock haulers that could assist in livestock movement on short notice, if applicable
- Identifying higher ground for equipment relocation (e.g., motors, tractors, tools, etc.), pesticides, fertilizer, or other chemicals
- Identifying electrical power switches/breaker to shut off power to areas where flooding is imminent
- Locating feed, bedding material, medications, etc., in areas unlikely to be flooded
- Considering methods of moving feed and water to low flood risk locations
- Checking that backup generators are in working order and extra fuel is available in the event of a power outage
- Test sump pumps regularly and install a back-up system (for example, battery back-up or generator)

Response

The necessary approach during a flood will depend on various factors including river or stream levels, winter snow load, ground conditions, and current and forecasted precipitation.

It is important to stay informed of situation developments and relocation instructions as they are communicated through online channels, television, radio, and social media. Always follow evacuation orders and ensure human safety first.

Actions to consider if an evacuation order is issued and time permits movement of animals:

- Arrange trucks, trailers, drivers, and handlers to move animals if necessary
- Use pre-arranged route to move livestock to a location where they will be safe from the flood (high ground) whether that be on-farm or off-farm
- Turn off electricity to barns and other structures to prevent fires or electrocutions
- Ensure animals have access to food, clean water, and ample living area
- If there is a possibility that dairy barns may become inundated, drive cattle out of the barn. During rapid rise of water, cattle often refuse to leave the barn and may drown inside if the water rises high enough. For this reason, begin evacuation measures before a state of emergency
- Opening gates and/or cutting fences will allow animals to move and avoid the flood if livestock cannot be moved to a pre-determined safe area. If animals are set free, local authorities should be notified immediately
- Block off narrow passageways where animals would be unable to turn around. A few heavy animals in a narrow dead end can be dangerous

Power Grid and Utilities Failure

Utility outages are generally unexpected and inconvenient. These downtimes can be triggered by a variety of events, including severe weather, wildfire, and other potential hazards.

Producers should consider the length of time their operations can function without electricity, natural gas, or water. Preparation and appropriate response will minimize the impact of prolonged outages and will help protect your equipment and livestock.

Power Outage Safety Tips

- Look up and down – look for electrical hazards overhead and underground
- Stay back – make sure you're standing at least 10 meters away from fallen power lines
- Call for help – if you see a power line on the ground, stay back at least 10 meters and call 911
- Determine what critical equipment and facilities rely on electrical power, natural gas, and/or water. Plan for if these utilities are unavailable
- Estimate how long can you operate without the utility
- Determine backup measures and have them available

Preparation

The following activities may help prepare producers in the event of an emergency:

- Ensure backup generators are available, in working order and are tested regularly
- Have sufficient fuel available to run generator(s) for at least seven days
- Identify locations of electrical breakers, water shut-off, and natural gas/propane shut-off and include on farm site map
- Ensure electrical panels are well-marked and breakers can easily be turned off
- Ensure that all cold and freezer storage for items such as milk, nutrients and vaccines are connected to back-up power
- Test critical equipment with backup power and ensure working as required
- Identify equipment that should be shut off during a power outage and record the sequence for reinstating power
- Determine how livestock will be fed and watered during a power failure
- Identify backup measures to supply heat for animals, if applicable
- Store battery-operated lights in a location that is easily accessible and have fresh batteries on hand
- Create a contact list that includes energy suppliers and electrician details
- Protect sensitive equipment with surge protectors
- Back up computer files regularly



Species	Response
Cattle - beef and dairy	<ul style="list-style-type: none"> • Lactating cows have an increased requirement for water; necessary steps should be taken to ensure those cows and all other affected cattle do not obtain their water intake solely by eating snow • Ensure that milking equipment and pumps are powered by generators to prevent milk supplies from spoiling and to reduce the risk of animal mastitis from the inability to perform daily milking activities • Ensure that water supply is continuous for all cattle. During the wintertime, ensure that water does not freeze in pipes
Horses	<ul style="list-style-type: none"> • Ensure horses maintain water intake, especially during the summertime as heat stress is deadly to animals • Low forage consumption increases colic risk • On an emergency basis horses can use snow as a water source, however supplying them with a source of fresh water during power outages should be a high priority
Poultry	<ul style="list-style-type: none"> • Provide power to poultry barns immediately as drastic changes in temperature can have a detrimental effect on flock health • Ensure that power is provided to barns that have electrically powered ventilation systems to ensure proper airflow and prevent oxygen depletion in the barn • Ensure any water pumps/ watering equipment is connected as drastic changes to water intake can have a detrimental effect on poultry health

Severe Drought

Droughts pose a serious threat to livestock and farming operations due to the inability to provide sufficient water to animals and the feed required to keep these animals alive.

Droughts can be categorized based on the population it impacts:

- Meteorological droughts are determined by the degree, duration, and other characteristics of the dry weather period
- Agricultural droughts link the meteorological droughts to agricultural impacts, accounting for soil and plant properties
- Hydrological droughts are related to the effects of dryness on surface and ground-water supplies

Preparation

Producers can take the following actions to prepare for low water and drought conditions:

- Develop a drought plan. Drought plans should identify the group or class of livestock to be depopulated first if necessary and at what point each group will be removed if the drought persists. This also includes noting any potential toxic or poisonous plants present in the grazing/ pasture lands which may become more prevalent due to the drought conditions
- Formulate a selling policy to help deal with classes of animals that are eligible for sale and the rate at which they are brought to market. Check for animals which are pregnant and that are younger in age.
- Wean calves as early as possible. This is important because this will allow heifers and cows to stay in better body condition
- Combine groups of animals for grazing. This will concentrate more animals in a single herd which decreases the number of paddocks/pastures being used at any one time
- Use instrumentation such as level sensors or rain gauges to measure how much water your crops are receiving
- Ensure the irrigation system doesn't water faster than the ground can absorb

Response

If low water/ drought conditions arise the following broad points can be applied to help reduce the risk of livestock problems and manage water until a permanent solution can be implemented.

- Consider reducing herd size to reduce the required amount of forage, feed and water required to keep the animals alive and healthy. Consider marketing healthy cattle to reduce stock
- Check for pregnant cows and potentially wean calves off faster to reduce water and feed consumption rates
- Feed and water testing are especially important during times of drought since uncommonly used water sources maybe used (i.e., dugout water)
- Extended rest periods and increased recovery times are necessary to protect plants during dry periods
- Attempt to leave plant residue/ litter on the soil surface to help moisture loss, shading and erosion from the elements to encourage plant forage growth and recuperation
- Locate areas where poisonous plants continue to grow as various species grow faster during drought conditions
- Seeding annuals as an emergency source of forage to supplement perennial pastures may be an option during periods of drought.

Livestock Vehicular Transport Accident (Livestock Hauler)

Thousands of animals are transported via livestock trucks across Canada, acting as a key and integral process in the farm-to-fork continuum. Though the likelihood of a truck vehicular accident is low, the risk is still present. Livestock transport accident knowledge and understanding is paramount to ensure animal, public and environmental safety.

The following list of general steps to guide action during a livestock vehicle accident:

- 1) Immediately call 911 to report the accident. In the event that the driver is incapacitated, the first individuals at the scene should establish contact with the authorities
 - Communicate any human injuries and indicate the type and estimated number of livestock involved in the accident to the authorities
- 2) Emergency warning devices i.e., pylons, warning lights, should be set out at the scene and appropriate company or farm personnel should then be notified
- 3) Attempt to herd/ corral any loose animals to prevent further accidents and/or traffic obstructions
- 4) If possible, work with first responders to free/ save any livestock trapped as part of the accident
- 5) Identify any compromised/ injured animals which may not be able to be transported humanely in accordance with Health of Animals Act part XII
- 6) Contact local veterinarians to determine whether there is a requirement to euthanize animals
- 7) Follow the direction veterinarians and emergency management authorities to close/ finalize the vehicle rollover situation



DO	DON'T
Set up containment before removing or releasing animals from trailer	Do not remove animals from wrecked trailer until corralling/ containment area for animals is established
Relocate livestock from holding areas into new trailers calmly	Do not yell, make abrupt or loud noises when handling animals as they may be easily spooked, causing them to be more difficult to handle. Do not use sirens or horns to herd livestock
Obtain a head count on all livestock involved in the accident including but not limited to healthy, injured, and deceased livestock	Do not attempt to remove livestock using machinery, equipment, ropes/winches, etc. Manual extraction techniques are safe and effective for removing livestock
	Do not become a secondary victim at an accident. All safety protocols must be followed