



*Farmers  
face special  
burning  
challenges*



# FireSmart your Farm

PROTECT YOUR OPERATION FROM WILDFIRES



# THE BIG PICTURE

## Country Living

Farming and living in rural Manitoba may be your dream come true but it can quickly turn into your worst nightmare when there is a wildfire approaching. The occurrence of wildfire in the wildland urban interface, where forests and grasslands meet development, has been increasing nationwide in recent years and is expected to continue to grow. This rise in interface wildfires can be attributed to a lack of natural fire in the ecosystem, increased residential development in the country setting, and climate changes.

The agricultural setting presents additional hazards such as equipment, fencing, bales, compost and manure and large open fields of cured grasses that act as fuel. The FireSmart program has produced a number of materials to educate property owners on what the hazards are and how to mitigate the risks.

As much as enjoying the landscape and living off the land add to the charm and rugged beauty of country life, the reality is, sooner or later you may be faced with the threat of a wildfire destroying your livelihood. Developing a FireSmart Protection Plan for your farm is key to ensuring you effectively mitigate hazards and increase the potential of your property surviving a wildfire while maintaining the country appeal.

Before you are confronted with an unexpected wildfire, create a plan to prepare for, respond to and recover from wildfire. Whether your farm operation includes livestock, crops or both, having a plan will help keep your family, farm employees, livestock, crops and property safe from wildfire.

### **TIP:**

*FireSmart farming is all about preparing your property for the threat of wildfire.*

**Be part of the solution –  
not part of the problem.**

# What is FireSmart?

FireSmart is living with and managing for wildfire on your landscape. Vegetation, buildings and machinery are all sources of fuel for a wildfire. So the more trees, shrubs, bales, straw piles, woodpiles and other flammable materials, including vehicles and equipment, you have on your property, the more you risk wildfire damage or loss.

Being FireSmart is an effective way to help prevent being the cause of a wildfire and most importantly, keeping wildfire from consuming your home and property. By following the FireSmart recommendations on vegetation management and hazard mitigation, you can reduce the fuel wildfires need to thrive and increase the chances of protecting your home from damage.

***Windblown grass fires have been known to travel at speeds exceeding 15 kilometres per hour.***

# FACTS ABOUT WILDFIRES

Did you know there are 3 types of wildfires?



## 1 GROUND FIRES

Ground fires burn under the surface (ex: peat, roots, manure).



## 2 SURFACE FIRES

Surface fires burn materials on, or close to, the ground (ex: pine needles, leaves, grass, twigs, leaf litter, stubble).



## 3 CROWN FIRES

Crown fires develop when surface fires use "ladder fuels" (branches extending from the ground to midway up the trees) to climb into the treetops. The ability of these crown fires to burn through mature trees/shrubs, and travel quickly over large areas, makes them the most destructive of all wildfires.



*Pick up a copy of the FireSmart Home Owners Manual for a complete list of ideas to help make your home FireSmart.*

## **ARE YOUR HOME AND FARM BUILDINGS FireSmart?**

There is nothing like living in the country, away from the noise, pollution and fast pace of city life. So it only makes sense that you want your home to reflect the country setting in which you've chosen to live, farm and raise your children.

At the same time, you want to keep everyone safe from the risks that come with rural living. The risk of a wildfire, with its potential to cause devastating damage and loss, is not a risk you can afford to take.



When living in a rural area, it's important to make your farm operation, as much as possible, fire-resistant. There are parts of farm structures more susceptible to fire – especially if flammable materials are used. By choosing FireSmart construction materials when building or renovating, it is possible to retain a country feeling without sacrificing your safety and well-being.

### **The Roof**

While wood shingles may be aesthetically pleasing, they provide almost no protection from wildfire. They are highly combustible and susceptible to flying embers. A metal or asphalt roof will not only increase your home's resistance to wildfires, but also lengthen the life of your roof. Don't forget to keep your roof free of debris.

### **Windows**

Tempered or double-pane glass windows are more resistant to flames and heat than single pane windows. You'll reduce your risk of wildfire damage/loss and, at the same time, trim the costs you're paying to heat and cool your home.

### **Outside Walls**

Stucco or brick on the outside walls is more effective than vinyl or wood in preventing flames and embers from consuming your farm structures.

### **Vents and Eaves**

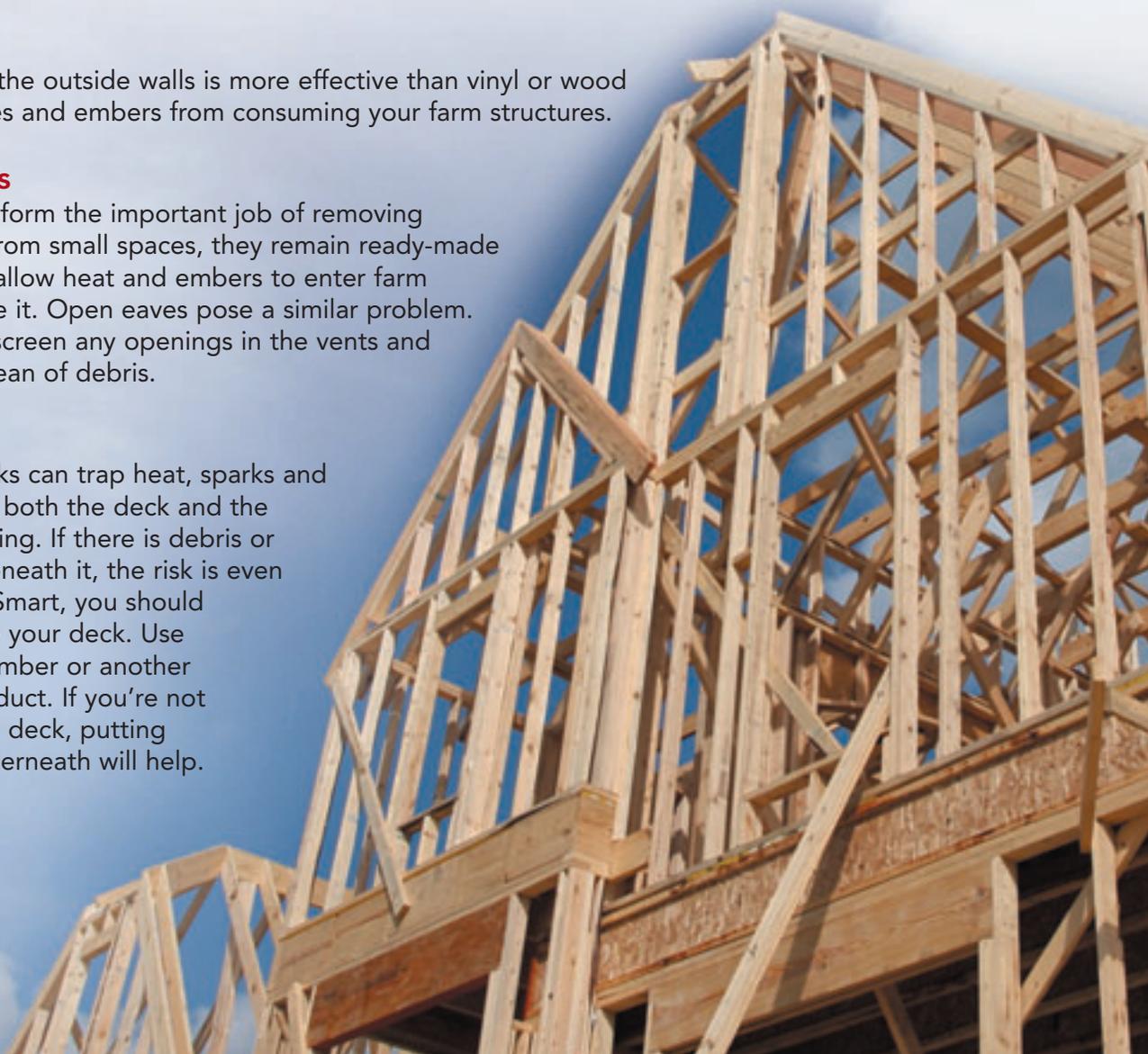
Although vents perform the important job of removing trapped moisture from small spaces, they remain ready-made openings that can allow heat and embers to enter farm buildings and ignite it. Open eaves pose a similar problem. So make sure you screen any openings in the vents and keep your eaves clean of debris.

### **Decks**

Above-ground decks can trap heat, sparks and embers, and ignite both the deck and the home's exterior siding. If there is debris or stored materials beneath it, the risk is even greater. To be FireSmart, you should completely enclose your deck. Use pressure-treated lumber or another flame-resistant product. If you're not able to enclose the deck, putting rocks or gravel underneath will help.

### **TIP:**

*If you're building new or renovating, consider making your farm operation more FireSmart to improve its chances of withstanding a wildfire..*

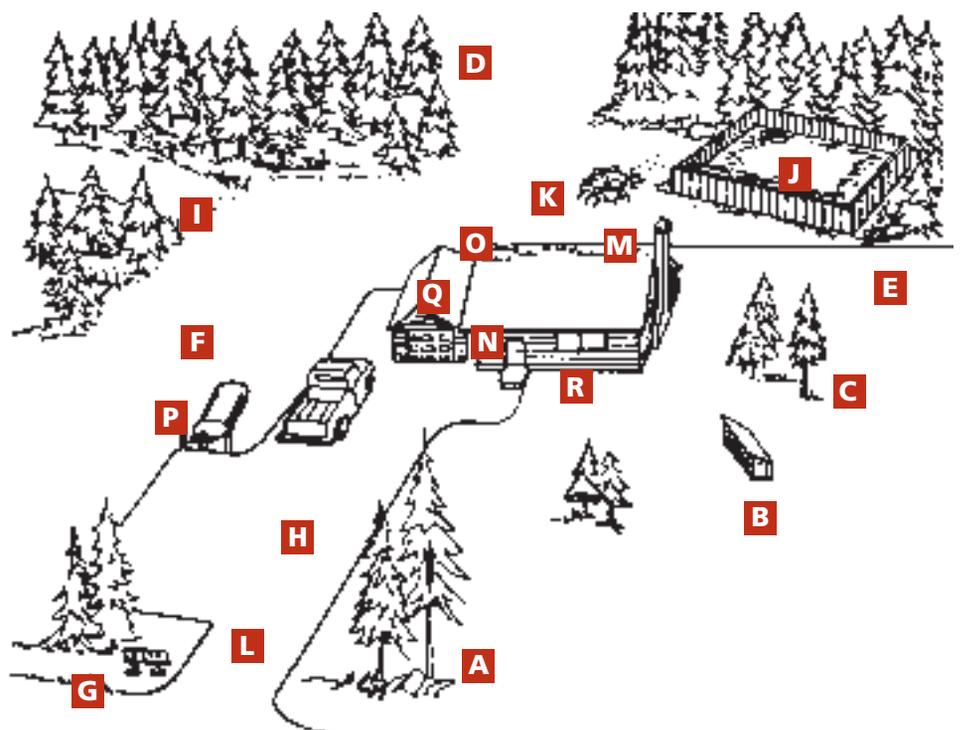


# A Well Thought Out FireSmart Protection Plan

*In Manitoba, the risk of wildfires is greatest from April to October.*

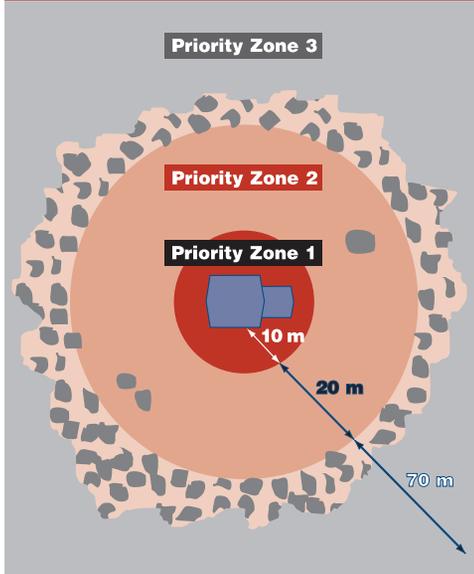
- A** prune tree branches to a minimum height of two metres
- B** store firewood a minimum of 10 metres from any structures (avoid down slope location)
- C** remove all combustible trees, long grass, shrubs, logs, branches, twigs and needles within 10 metres of a structure
- D** thin trees (with three to six metres between crowns) for at least 30 metres from any structure
- E** contact your utility company if trees or branches are not clear of power lines
- F** keep grass within 10 metres of buildings mowed and watered
- G** have your address, municipal fire number or lot number clearly visible for quick identification by fire services
- H** make sure your driveway is wide enough to accommodate emergency vehicles so they have enough space to turn around
- I** provide an alternate emergency access route to and from your property
- J** pond or tank with emergency water supply
- K** FireSmart your fire pit or burning barrel
- L** clear your driveway of trees to a distance of at least three metres on either side
- M** make sure your chimney is to code and has spark arrestor screens installed
- N** close in your eaves, vents, and soffits
- O** sheath undersides of balconies, decks and crawlspaces with flame resistant materials
- P** locate propane tanks at least 10 metres from any building and clear vegetation at least three metres around propane tanks
- Q** use only rated fire resistant roofing and fire resistant exterior siding
- R** solid shutters or metal firescreens will provide increased fire protection for windows and doors

*The individual who starts a fire may be responsible for all costs necessary to put it out, and possible liability from damage caused by the fire.*



# The Home and Farm Buildings Priority Zones

## Interface Priority Zones



By managing the vegetation and hazard fuels in the three priority zones, you can potentially reduce the burning intensity of an approaching wildfire. This will increase the likelihood of your home and farm buildings surviving the flame front and flying embers.

**Priority Zone One:** is the 10 metre space immediately surrounding your home and farm buildings. It is critical for your home and property's survival to have a FireSmart Strategy in this zone. Remove flammable trees and shrubs, such as pine, spruce and juniper, especially those immediately adjacent to the structures. Species such as, aspen, poplar and birch trees, have lower flammability rates. Remove deadfall or woodpiles from this area and keep your grass mowed and watered and rake up any leaves and debris on the ground regularly.

**Priority Zone Two:** is the 10 – 30 metres space away from your home and farm buildings. In this zone, you should reduce fuels by thinning and pruning trees so intense wildfires don't have as much fuel to burn. Remove any trees and debris that would support the rapid spread of a wildfire. Thin or space trees so that the crowns (tops) of trees are at least three-to-six metres apart. Remove tree branches up to two metres from the ground.

**Priority Zone Three:** begins 30 metres from your home and farm buildings and extends to a distance of 100 metres and beyond. In this zone the idea is not to remove all combustible fuels from the forest, but to thin the area so fires will be low intensity and more easily extinguished.

## Managing vegetation around fence lines, corral lines and ditches

Unmanaged fence lines, corral lines and ditches can lead to a buildup of grass, weeds and brush - excellent fuel for wildfires. To prevent fires from starting, or spreading, manage the vegetation (for at least 100 metres in all directions) by mowing the areas and using herbicide/weed eater under the wires and between the posts.

## Other areas

**Granaries, barns and outbuildings:** Use the vegetation management strategies you've learned to reduce the threat of wildfire.

**Old corrals and unused corners of your yard:** Manage these areas through mowing, grazing, weed-eating, treating with herbicide and/or gravelling.

**Around dugouts and other water sources:** Keep these areas free of equipment, batteries, scrap iron, lumber, posts and other trash to provide easy access for firefighters and other emergency vehicles.

## Managing feed storage

Dry bales are a magnet for sparks and embers. No matter how you store the bales, once ignited, they cause fires that spread rapidly and are difficult to control or extinguish. Fires in stored hay are usually

the result of high heat or spontaneous combustion. The principle cause is an excess of moisture. To prevent this, ensure the hay is cured to the proper moisture content before baling.

Store bales a good distance from any structures to minimize the spread of fire to your house and outbuildings. The area between the bales and buildings should contain minimal vegetation - preferably mineral soil or gravel. If you do have grass in this area, it's essential that it remain short.

Be FireSmart by storing your winter supply of bales in a few different locations to minimize loss should a fire occur. As well, if you use the bales closest to the house and out-buildings during feeding season, you will end up with a larger buffer in that area come spring.

Another important FireSmart practice is to clean up the old hay and straw that accumulates from broken bales and bale bottoms that freeze over the winter.

### You can do this by:

- *hauling it out onto the pasture for the livestock to pick through*
- *spreading it over the field (like manure)*
- *letting your livestock graze the leftover hay*



**Check your local municipality burning bylaws to find out if you need a burning permit. If you are within the provincial burn permit area, you need to obtain a burning permit. (April 1 - Nov. 15 only)**

## Outdoor Fires

According to Part 5 of *The Wildfires Act*:

**No person shall:**

- *start a fire that is likely to burn out of control, burns out of control, or endangers life, land or property*
- *obstruct an officer, a temporary fire guardian or a person in charge of a wildfire protection operation in performing his or her duties*
- *fail to follow the direction or order of an officer or person in charge of wildfire protection operations*
- *impede wildfire protection operations*

**No person shall** start a fire to guard property, clear land, or burn debris, crops or stubble, unless the land on which the fire is started is completely surrounded by a strip of land not less than six metres wide, **AND**

- *the strip is free of inflammable material or*
- or
- *all inflammable material on the strip is covered by snow or water*

**No person shall** on any land:

- *start a fire*
  - *without taking sufficient precautions to ensure the fire can be kept under control*
- or
- *when weather conditions are conducive to a fire burning out of control*
- *fail to take reasonable steps to prevent a fire from spreading*
- *place any burning or smouldering matter in a place where it may cause a fire that could spread*
- *conduct an activity that may cause a fire to spread*
- *leave the place where he or she has started a fire without ensuring the fire is out*

# Outdoor Fire Safety

## Tips to Ensure a Safe Burn

As a farmer, there are times when you have no choice but to start a controlled fire to burn things like windrows, grass, stubble and piles. Make sure you follow the Dos and Don'ts listed on page 10 to guide you towards a safe burn. Here are some additional tips to ensure the safe burning of windrows, grass and stubble, and piles.

## Burn Barrels and Fire Pits

Burn barrels and fire pits are necessities for most farms. To squash their potential to be wildfire starters, **just follow these simple rules:**

- *Always cover your burn barrel with a metal screen. This keeps any stray sparks or burning debris under control.*
- *Drill holes in your barrel (if they're not already there) to ensure proper ventilation.*
- *Clear away any debris or grass for at least three metres around your barrel or fire pit. You can also surround it with small stones, gravel or sand to contain the embers and hot ash.*
- *Locate your barrels and fire pits at least 30 metres from any structures or standing trees. The ideal location is close to a water supply, and sheltered from the wind.*
- *A safer way to dispose of debris is to take it to your local landfill.*

## Dry grass, grain/hay fields and pastureland

Reducing dry grass, hay and stubble will help prevent a yard fire from spreading, or stop a fire from entering your yard.

**Here are some guidelines to follow:**

- *Keep your grass cut. A patch of mowed lawn can slow the spread of a fast-moving grass fire or cause it to burn itself out.*
- *Work up grain fields next to building sites - or at least work up a strip to act as a fuel break - to prevent any fires from coming into your yard.*
- *Before putting your tillage equipment away for the winter, take a few passes around the yard to make sure nothing's been missed.*
- *Wait until very late in the season to cut any hayfields close to the yard as this will minimize re-growth. You can also mow a strip next to the building to act as a fire guard.*
- *Allow livestock to graze in the fields close to the yard. This will help reduce the vegetation and potential fire hazard.*
- *Till around the outside perimeter of your pastureland. This will create a fire break that could save the field from burning, or stop a fire from spreading to your other fields.*

## **TIP:**

*Never leave your burn barrel or fire pit unattended when in use.*

## **STUBBLE BURNING**

## **TIP:**

*Always call before you burn. To check daily burning authorizations call: 1-800-265-1233 or visit: [manitoba.ca/agriculture](http://manitoba.ca/agriculture)*

## **TIP:**

*A highly visible, reflective and fire-resistant address sign (ex: metal sign and posts) can be your best friend during fire season, as it can help emergency responders find your place.*



### Windrows:

- *Avoid building windrows on swamps/bogs.*
- *Use a brush rake or excavator to reduce the amount of dirt in the rows. This promotes better burning.*
- *Pack the rows as tightly as possible.*
- *Build the windrows across the direction of the prevailing wind.*
- *Make sure windrows are no longer than 60 metres, and are situated a minimum of 25 metres from standing timber.*
- *Ensure that at least 15 metres of bare mineral soil surround all windrows.*

### Grass and Stubble

Farmers face significant challenges when burning in the spring and fall. Weather conditions need to be ideal and fields must be prepared to contain the fires so they don't spread too far, too fast. *Here are some guidelines for a safer burn:*

- *Always follow the conditions of the fire permit when burning grass and stubble.*
- *Blade or plow down to mineral soil, at least five metres around your burn, to create a guard that keeps the fire from spreading.*
- *Break down larger fields to smaller sections for more manageable sized fires. Build fire guards around each section. Only set fires that can be controlled at all times by having sufficient manpower and equipment available.*
- *After completing the burn, continue to patrol the area until the fire is completely out.*

### Piles

Pile burning can be particularly tricky because it can result in deep ground fires that last long after the surface fire is out. *Here are some tips to safe, effective pile burning:*

- *Burn when there is snow cover and frozen ground, whenever possible.*
- *Re-pile and re-burn, if necessary, until the pile is completely gone.*
- *Using a metal rod, probe the pile for hotspots. These hotspots can smoulder long after the fire appears to be out, and can come back to life in the spring.*
- *Check piles in March and April to make sure there are no smouldering embers and all potential fires have been extinguished. This is important because pile fires can burn under the snow all winter.*



# The following **Do's** and **Don't's** will help guide you towards a safe burn:

## Do burn:

- in the early mid-morning or late afternoon
- when you have what you need to safely and effectively control the fire – adequate supervision, manpower, equipment and a nearby water supply
- from the outside perimeter, and against the wind
- with the authority of a burning permit, when allowed
- Once you have a tilled fire break

## Do NOT burn:

- under extremely dry conditions, where there's been no precipitation for a long period of time
- at the end of the day (Embers can remain hot for days, even weeks, so ensure the weather is safe the next day and monitor your fire for at least a few days later to ensure it's out.)
- when the forecast calls for high temperatures, gusting winds or winds greater than 15 kilometres per hour
- when humidity is low or when there are thunderstorms in the area
- vegetation (fuels) that are more than 90 per cent cured (If you must, use extreme caution, because fuels this dry will cause high-intensity fires.)
- on an upward or downward slope
- where there is a lot of fuel/vegetation
- during a Burning Ban period (Contact your local municipality for more information.)

### **TIP:**

An outdoor fire can quickly become a wildfire – never think it is “just a grass fire.”

### **TIP:**

Short green grass may help slow down fast-moving grass fires.



# Be a Responsible Operator

## Keep your farm vehicles debris-free

Did you know that, in Manitoba, many wildfires are started each year by farm vehicles? Some have resulted in large, expensive wildfires that threatened homes and communities. Most machinery fires happen in the spring when the snow has melted and the grass is dry.

### **TIP:**

Put a fire extinguisher in every vehicle. Although it won't put out a wildfire, it could prevent one from starting.

## How does machinery start fires?

Vehicles exhaust system can heat up to 500°C. When you're out operating, debris can build up on the exhaust and next to engine hot spots. When the debris dries out, it is ignited by the hot engine. These burning pieces of debris then fall off the machinery into dry fields, often starting wildfires.

## You can do your part. Remember these four tips:

- Before you operate, inspect your machinery and clear any debris that has built up near the exhaust or other hot spots.
- Avoid operating in wet areas. (If you do, stop to remove all debris from your engine and other hot spots before it can dry out, heat up and ignite.)
- Always carry a small fire extinguisher, collapsible pail and shovel on your machine.
- Avoid riding in long cured grasses, or when it has been hot, dry and windy for a few days, when vegetations has very little moisture.

**Most machinery fires happen in the spring and fall during harvest.**



# Driveway Etiquette

In a wildfire, emergency vehicles must be able to access your property if they need to. Take the following measures to ensure your driveway is prepared to FireSmart standards:

- *Make sure your driveway is wide enough to accommodate emergency vehicles so they have enough space to turn around – at least four metres wide.*
- *Clear your driveway of trees at least three metres on either side.*
- *Any driveway longer than 90 metres should have a turnout space to allow fire trucks/equipment to pass or turn around.*
- *Don't block your driveway with gates, archways, etc. – anything that would restrict or slow down access to emergency vehicles.*
- *Don't have any clutter blocking the driveway.*
- *If you have a dugout or other water source (ex: lake, river, creek), ensure that vehicles have access so they can fill up their tanks.*

## **TIP:**

*Fire trucks and emergency equipment need to know where they are going, so your rural address really matters!*



# Protection plan for crops and livestock

- Owners should have an evacuation plan for livestock threatened by fire. If animals can't be moved to a safe area on your property, it's important that a plan, which includes transportation and feeding arrangements, be in place in advance.
- Get insurance coverage for all farm resources at risk from fire, including crops and livestock.
- Reduce the risk to farm animals by maintaining fuel-reduced areas (areas without a lot of vegetation). Livestock can be moved and held there during a fire. Use a ploughed or heavily grazed field with very little grass or stubble. If possible, the field should be shaded and located well away from forested areas. Water should be available.
- Concrete or metal buildings, located away from forest vegetation, are another shelter option for livestock.
- As a last resort, if you are unable to move live stock to a safer area, cut the fences and turn the animals loose – as long as there is no danger to people or traffic.

## **CHECK YOUR INSURANCE POLICY**

### **TIP:**

Don't let wildfire take you by surprise this summer. Review your insurance policy, and prepare yourself for the risk of wildfire ahead of time. It could make all the difference.

### **TIP:**

Owners should have an evacuation plan for livestock threatened by fire. If animals can't be moved to a safe area on your property, it's important that a plan, including transportation and feeding arrangements, be in place in advance.

## Safety and Health Emergency Planning

Every farm needs to be prepared for possible emergency situations. Planning and preparing ahead for emergencies is crucial and can save lives. Creating a safety and health emergency plan and identifying the people, resources, and processes needed for each possible emergency will result in a faster, more organized response in the event of an emergency situation. Providing emergency responders with important details about your farm can also help prevent losses and damages to your farm.

SAFE Farms has developed a tool to help you develop a safety and health emergency plan for your farm. Pick up a copy of the new SAFE Farms: Safety and Health Emergency Planning Kit at your local Manitoba Agriculture Food Rural Development (MAFRD) Office, local Conservation and Water Stewardship Office or Office of the Fire Commissioner. Download a copy online at [www.safemanitoba.com/farms](http://www.safemanitoba.com/farms). For more information on SAFE Farms, email: [safefarms@gov.mb.ca](mailto:safefarms@gov.mb.ca)

# EVACUATION –

When an evacuation order is given, you must leave your home. Do not take chances. Large, moving fires are very dangerous and should only be handled by professional firefighters.

## WHEN YOU EVACUATE, FOLLOW THESE FIVE EASY STEPS:

- 1** *Don't panic. Use your pre-planned route or follow directions from authorities onsite.*
- 2** *Move away from the wildfire – never toward it. If in doubt, use the recommended evacuation route.*
- 3** *Drive carefully, with headlights on. Watch for pedestrians and emergency vehicles.*
- 4** *Report to authorities and wait for further instructions. Don't leave without telling officials.*
- 5** *Don't return to your property until authorities say you can.*

**Report fires immediately to your local fire department or 911 Emergency (where available).**

**Report Wildfires 1-800-782-0076**

### **TIP:**

*Until an evacuation order is given, it is safe to stay at home, keep in touch with absent household members and have a battery-powered radio ready in case of power failure.*



**For more information on Home and Site Hazard Assessment or Landscaping tips refer to:**

The Home Owners FireSmart Manual

<http://www.gov.mb.ca/conservation/fire/Prevention/FireSmart%20Manual2%202011.pdf>

Be FireSmart: A Guide to Landscaping Practices that Protect your Home from Wildfire

<http://www.gov.mb.ca/conservation/fire/Prevention/FireSmart%20Landscape%20brochure2011.pdf>

**FOR MORE INFORMATION CONTACT:**

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