

Farm Fire Prevention Guide

Fire safety planning starts with you

Farm and agribusiness owners should periodically review potential hazards and conditions that could lead to a fire and develop a fire safety plan.



Photo courtesy of Sioux County Sheriff's Office

- *Heating equipment is the leading cause of fires in farm buildings.*
- *Farm structure fires are most frequent in late winter and early spring.*
- *Barn fires are not small. Half of all barn-structure fires involve the entire building.*

GENERAL BUILDING SAFETY

- All farm buildings, regardless of size, should have a minimum of two exits, both easily accessible.
- Use building materials that are flame retardant or fire resistive. Install and maintain lightning rods and grounding cables.
- Practice good housekeeping; cobwebs and dust are combustibles.
- Remove brush, weeds, and tall grass from around buildings. Keeping a clean, clear space around buildings and general yard areas can help reduce the risk of fire spreading from one building to another.
- Store hazardous products (e.g., herbicides, insecticides, fungicides, fertilizers) according to manufacturer's recommendations and applicable regulations.
- Compressed air cylinders should be kept in good repair; protect valves from mechanical damage.
- Provide adequate ventilation in work areas to reduce carbon monoxide or fume buildup.
- Perform welding and cutting operations only in areas that are free of combustible materials.
- Ensure that emergency generators are in good working order and only use in areas that are well ventilated, away from children and pets, and away from air intakes to the home.



Farm shops should have at least one wall-mounted 10-pound ABC extinguisher.

ELECTRICAL SAFETY

- Disconnect or unplug electrical equipment and appliances when not in use and use extension cords only on a temporary basis.
- Use stall fans, space heaters, lights, and radios only when someone is in the barn.
- Ensure electrical repairs and installations are performed by or inspected by a licensed electrician; use covered GFCI outlets.
- Ensure all electrical panels are readily accessible and clearly labeled.
- Avoid storing anything within three feet of any electrical panel and clearly label every disconnect and circuit breaker.
- Enclose exposed wiring in conduit to protect against exposure to weather, animals, and mechanical damage.

CONTROL POTENTIAL IGNITION SOURCES

Understanding how to prevent fires from starting is essential in protecting your farm or agribusiness from fire loss.

- Strictly enforce a 'NO SMOKING' policy in and around all farm buildings.
- Keep engines, motors and machinery well maintained and clean to prevent malfunction and overheating.
- Make sure all flammable and combustible materials such as gasoline, kerosene, paint thinners, and paper are properly stored in labeled containers away from possible ignition sources.
- Make sure equipment is turned off and allowed to cool before refueling, and refuel outdoors.
- Maintain adequate clearance for combustibles around heaters.
- Always obtain the proper burning permits before burning any brush or grass and keep burn piles well away from buildings; maintain at least a 50-foot fire break around the barn.



Before using a fan, portable heater, or heat lamp in farm buildings, be certain it is designed for agricultural or industrial use. The fire risk is extremely high when residential products are used in farm buildings.

TRACTORS, COMBINES AND OTHER MACHINES

Common causes of machinery fires include defects in the fuel or ignition systems, improper refueling methods, smoking and matches, over-heated engines, and sparks from exhaust and friction.

- Refuel with care. Keep all equipment used for petroleum storage and handling in good condition. Watch for leaks, deterioration or damage. Make needed repairs or replace faulty components immediately.
- When servicing machinery, inspect the fuel system for leaks. Check connections to be sure they are secure and leak-free after changing fuel filters or performing other work requiring disconnecting or removing a fuel line or fuel system component.
- Keep exhaust systems in good condition to avoid sparks.
- Fire extinguishers should be mounted on tractors, combines, trucks and other equipment. Because most fires associated with these types of equipment are from petroleum products or electrical fires, a ten-pound ABC extinguisher will be adequate.



It's a good practice to have at least one ABC type extinguisher in all farm buildings and in other areas where there is a risk of a fire, such as around grain drying and processing equipment.

FIRE SAFETY PLANNING

Plan Ahead! If a fire occurs at your farm you may have only a few minutes to act. Develop a fire safety plan for your farm or agribusiness to reduce fire loss. *Fire safety planning starts with you.*

- Identify exits and possible evacuation routes from all farm buildings. Ensure all family members and employees are familiar with evacuation routes.
- Make arrangements to house livestock in the event they need to be evacuated from a fire.
- Maintain an identification list of all animals on your farm including pertinent details about their health (i.e., vaccinations, medications).
- Review the plan with all family members and employees. Update your plan regularly to accommodate changes to the buildings, livestock or employees.
- Invite the local fire department to tour your facilities. Point out the location of all power shut-offs and water source locations. It is also a good time to inform them of potential farm hazards.



PROVIDE ACCESS FOR FIREFIGHTING

Ensuring that firefighters can easily access all buildings and areas of your property will avoid costly delays.

- Provide and maintain a clear unobstructed roadway or solid yard area for each building.
- Park farm equipment and machinery in an area that does not restrict traffic flow around the barn.
- Provide gateways through fences with a clear width for fire department equipment.
- Provide clear, year round access to reliable water supplies that might be required for firefighting. Maintain wells and pumps to provide accessible, year round water supply for firefighting.

INSTALL AND MAINTAIN FIRE PROTECTION SYSTEMS AND PORTABLE FIRE EXTINGUISHERS

Reduce the risk of fire loss on your property by developing fire protection measures to extinguish or control a fire until firefighters can arrive.

- Install multi-purpose fire extinguishers in farm buildings and on tractors, combines, and other machinery. Maintain and inspect them regularly.
- Make sure family members and employees know where extinguishers are located and how to use them.
- Consider installing smoke detectors, fire alarms and fire sprinkler systems.

RE

vent fires from starting. First prevention efforts. When a fire everyone must be evacuated from the

Whether the type of fire (e.g., give them your address and

1.

of the fire. Is there smoke being fully engulfed in flames?

Are any people injured or

Are animals involved. Note the animals are loose or confined are still in the building.

Difficult to see or find, send the fire department. Many delayed response time due to

Access to the building.

Building! If you are the only one how you are inside. If the roof is at any time.

field, corral or trailer away



from a State University
Farm and Land Stewardship
Health • Non-profits for Farm Health

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CONTACTING EMERGENCY SERVICES



Knowing how to contact emergency services and being able to direct them to the right place will avoid unnecessary delays in response time.

- Prominently post the fire department phone number (or 9-1-1) and clear, concise directions to your property. This will allow you to provide clear instructions to responding emergency services.
- Make sure your neighbors and the fire department know any important information about your farm and the buildings. Provide them a copy of your *Pre-Plan Data Sheet*.
- Buildings need to have legible address numbers visible from the street or road fronting the property.



Photo by Robert Crozier, Anamosa Journal-Eureka

WHAT YOU NEED TO KNOW ABOUT FARM FIRES

AT NO TIME SHOULD ANYONE PUT THEIR OWN PERSONAL SAFETY IN JEOPARDY TO SAVE AN ANIMAL OR EQUIPMENT FROM A FARM BUILDING THAT IS ON FIRE.

A barn fire is fast, it only takes three to four minutes for a fire to fill a barn with smoke, and a barn can be completely engulfed in flames in less than 5 minutes.

The majority of farm structure fires occur late at night or in early morning hours, often going undetected until flames are showing.

Check with your insurance company about lower premiums if extra fire safety precautions are taken.