



# U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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UNIVERSITY OF MINNESOTA

EXTENSION

## Barn Fire Safety

By B. Gilkerson Wieland & J. Shutske, PhD, U of M

Recently, a large horse barn in Wright County, MN burned, leading to several questions regarding fire safety in horse barns. Fire is caused when any type of "fuel" meets an "ignition" source. Hay and bedding material are common examples of fuel. Smoking, faulty electrical wiring, and improperly cured hay are common sources of ignition. The key is to minimize the potential for fuel and ignition sources to come together. Often, this is a matter of basic housekeeping. Here are some tips to help reduce your chance of a barn fire.

**Identify ALL potential ignition sources**, and take steps to eliminate them. For example, smoking should never be allowed on a property with horses. Electrical wiring must be done by a qualified electrician and inspected by a local building inspector or insurance expert. Lightning protection systems must be installed to code and maintained. Do not use extension cords except for short-term uses such as powering a tool. Make sure heating systems are properly installed and maintained. Store/buy hay only at the correct moisture (<17% moisture) and check its condition frequently. Hay over 25% moisture poses the threat of combustion. Commercially available hay temperature probes can be used to check the internal temperature of hay bales (the internal temperatures should be below 130° F) and stack hay to encourage air circulation (for more information see fact sheet on Horse Hay at [www.extension.umn.edu/horse](http://www.extension.umn.edu/horse)).

**Take a close look at all potential ignition and fuel sources** and how they might come together to start a fire. Take specific actions to separate these hazards. An example is a heat lamp located over bedding materials or any type of flammable surface. Liquid fuels should be stored in protected locations.

**Look for immediate steps** you can take. Things like "No Smoking" signs posted in barns and hay storage areas are not expensive and are effective if enforced.

**Check wiring for obvious problems.** Make sure no bare wires are exposed. Look for marks on the wire that indicate heating or arcing. DO NOT overload circuits. If you blow breakers or fuses, investigate and correct the problem. Do not use extension cords to replace fixed electrical wiring. Extension cords are a major fire hazard and can lead to an electrocuted animal or person. Make sure electrical motors on ventilation fans, heaters, and other equipment are well-maintained.

**Separate hay and bedding from the livestock.** Most insurance companies will only allow a small amount of hay to be stored in the same building as animals or require the installation of a firewall between where horses are housed and storage areas. Make sure that the areas around barns and other outbuildings are kept clear of brush, shrubs, woodpiles, and other materials that could feed a fire.

**Install and frequently inspect fire extinguishers.** Your insurer can advise you on the best type of portable fire extinguishers or fire sprinkling systems to install. Fires in hay or in wood structures will require large amounts of water.

**Develop an emergency plan and post it in the barn.** Everyone must know how and when to evacuate the barn, how the animals will be removed, and who does what. Go over this plan with everyone including family members, employees, and boarders. All buildings must have multiple unblocked exits that people and animals can get out of quickly.

**Check local building codes and fire safety regulations.** For more information contact your local city hall and visit with a city/township building inspector who can provide additional resources.

**Consider installing emergency lighting and lit exit signs.** This will help if the power is out or if there is a lot of smoke. Such lighting may be more important for commercial facilities.

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### Up Coming Events

#### Lakes Region Horse Fest

September 21-23

Little Falls, MN

[www.lakesregionhorsefest.com](http://www.lakesregionhorsefest.com)

*U of M Faculty will be speaking*

#### Equine Center

##### Grand Opening

October 15th, 2007

2:00 pm

1530 Fairview Avenue

U of M St. Paul Campus

#### 2008 Regional Horse

##### Owner Programs

St. Paul, MN

February 2

Morris, MN

March 1

St. Paul, MN

Advanced Program

March 15

TBD Bemidji, MN

TBD Mankato, MN

*More information will be available in future newsletters.*

### Interested In Forages?

The U of M Forage Team has launched a new forage website and e-newsletter.

The website address is: [www.extension.umn.edu/forages](http://www.extension.umn.edu/forages)

### Upper Midwest Hay List

The Upper Midwest Hay List is a website designed to connect livestock owners in need of hay with farmers who have hay to sell. The

website address is:

[www.haylist.umn.edu](http://www.haylist.umn.edu)



# Fencing Options

By: B. Mowrey, PhD, North Carolina State & K. Martinson, PhD, U of M

Deciding on a fence is a major decision and investment for many horse owners. Factors horse owners should take into consideration are:

**Planning.** Design a pasture and paddock system that will centralize access to the barn, work, and feed storage areas. Also consider future expansion opportunities. Gates should be placed in corners closest to the direction of travel. Gates should be large enough to get equipment and several horses through at once. Avoid placing gates in low areas where water may pool. Sacrifice paddocks (paddocks where horse are held when no on pasture) can vary in size but should provide a minimum of 400 square feet per horse.

**Budget.** A fence can be a major investment. In addition to the cost of materials, you have to consider the cost of maintenance. Some fences may have high initial cost but low maintenance cost. Conversely, some have lower initial cost but high maintenance cost. Owners should consider affordability both initially and in the long term and then choose the fence that offers the best features within an acceptable price range. Quoting fence prices can be difficult, however, Table 1 discusses different fences and cost and maintenance estimates.

**Safety.** A properly installed and maintained fence should provide safety for both horses and people. There are several factors to consider in fence safety. First, a horse has limited eyesight. Therefore, a fence should be

highly visible. Second, it must be solid enough to repel a running horse yet flexible enough to prevent injury. There should be no sharp edges (no barbed wire) or projections on the fence.

**Installation.** Another factor is whether you have the time and the expertise to save money by installing the fence yourself, or if you need to hire a professional contractor. Improperly installed fences will be less effective with higher maintenance costs.

**Containment.** The priority of all fences is containment. Perimeter fences should be approximately 5 feet high while dividing fences should be 4 1/2 to 5 feet high.

**Durability.** How long a fence lasts is a function of the type of material it is made of, the construction of the fence, the weather exposure it receives, the size and aggressiveness of horses contained, and how well the fence is

maintained. Even good fences can fall into disrepair if problems are not identified and corrected in time. Check manufacturers recommendations, independent (i.e. University) product test results and if possible, other horse owners who are currently using the product.

**Appearance.** The appearance of the fence should be the final consideration. An attractive and well maintained fence promotes pride in ownership, increases property value and gives an impression of professionalism. One approach would be to place more expensive, eye appealing fences in the well-traveled areas and less expensive fences in other areas. However, the more attractive fences must also be functional. Never let appearance alone lead you to choose a fence that doesn't meet your needs.

Table 1. Common equine fence types, costs, longevity, and installation.

Fence Type	Cost Estimate	Maintenance Estimate	Expected Life (in years)	Installation Labor Required
Wood (post and rail)	High	High	15-20	High
Plastic (post and rail)	High	Moderate	20-30	High
Steel Pipe	High	Low	15-20	High
High Tension Wire	Moderate	Moderate	20	Moderate
Electric Wire	Low	Low	20-25	Low
Electric Tape	Low	Low	10	Low

## Ask the Expert

Q: My mare acts up when she is in heat. We aren't planning on breeding her so we are considering having her spayed. What are our options?

A: You do have a few options. However, it is important to make sure the ovaries are the cause of the behavior problem. Medical treatment involves adjusting her hormones so she doesn't come into heat. The most commonly used drug is progesterone

By: Micky Trent, DVM, U of M

(Regumate®). Inserting an intrauterine marble is also a non-surgical option, but should be discussed with your veterinarian.

Surgical treatment generally involves removing the ovaries and leaving the uterus. The U of M recommends a standing ovariectomy using the laparoscope and an instrument that melts the blood vessels shut. The laparoscope is the

key tool for minimally invasive (keyhole) surgery and allows rapid healing with minimal complications. It also lets the surgeon see the ovary and its blood vessels.

Other options for removing ovaries include flank or vaginal incisions, without the laparoscope. These methods have additional risks, including hemorrhage and problems associated with the incision.