

# LOSS CONTROL BULLETIN

## Agricultural Safety

### *Hay Fire*

**FACT:** A hay fire can devastate a farming operation. The risk of physical injury, damage to livestock and equipment, and loss of income can all be reduced by taking a few simple steps.

Spontaneous combustion is a word we don't want you to hear from the local fire department. If hay with high moisture is stored, a fire could ensue within one to six weeks of storage. If you believe you may have stored your hay with high moisture content (20% or greater for small rectangular bales and 16% for large rectangular or round bales) monitor the temperatures to avoid a hot bale of hay.<sup>1</sup>

New hay stacked in the field or placed in a barn should be checked frequently for possible heating. Check in the morning and afternoon. If no signs of abnormal heating are found, the intervals may be lengthened. If the temperature reaches 130°F, move the hay to allow increased air circulation and cooling.

Even after storage, moisture from a rain or leak can also lead to excessive heating. Hay stored uncovered outdoors (big round bales and stacks) should be formed into the tightest packages possible to resist penetration by rain. Do not place unprotected bales or stacks tightly against each other. Instead, place the bales where air can circulate freely. Protect the bales from ground moisture and runoff by placing them on a bed of gravel, old tires, poles or pallets. Plastic or other waterproof covers will protect bales by shedding precipitation. If storing hay inside, be sure the barn roof and any plumbing does not leak and allow for adequate ventilation and spacing. Likewise, provide adequate drainage so water will not enter the barn during storms.

*(over)*

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What You Value Most <sup>SM</sup>*

For more information or  
to locate an agent near you  
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<sup>1</sup> Hall, Marvin. (2006, May). *What to do with wet hay?* Penn State Field Crop News, May 17, 2006 Vol. 6:04. Retrieved May 1, 2009 from <http://fcn.agronomy.psu.edu/2006/fcn0604.cfm>.

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## Measuring Hay Temperatures With A Probe

Hay moisture meters and temperature testing can help you monitor your hay. Alternatively, you can use a probe and thermometer to measure temperature. The probe is pushed or driven into the stack and the thermometer is lowered to the end of the probe on a light wire. If the probe is horizontal, use a heavier wire to push the thermometer into the probe. After 10-15 minutes, retrieve the thermometer and read the temperature. To check the temperature without a probe and thermometer, push or drive a 2/8 to 1/2 inch diameter metal rod into the hay and leave it 10-15 minutes. Pull the rod out and test its temperature with your bare hand. If you can hold the rod in your hand comfortably the temperature is below 130°F. If you can hold it, but it is uncomfortable, the temperature is in the 130° - 160°F range. If the rod is just too hot to hold in your bare hand, the temperature is over 160°F and a fire is imminent.

## Recommended Moisture Contents for Baling Hay<sup>2</sup>

Baling Method	Hay Moisture Content <sup>3</sup>
Large Packages (round bale, stack)	15-18%
Conventional Square Bale	20-25%

<sup>2</sup> Prather, Timothy. (October 1988) *Hay Fires: Prevention and Control*. University of Tennessee Agricultural Extension Service. Retrieved September 8, 2009 from <http://www.nasdonline.org/docs/d000701-d000800/d000758/d000758.html>.

<sup>3</sup> Maximum moisture contents are for grass and legume hays

*If you are unsure about practices regarding moisture testing or hay storage,  
please contact your local agricultural extension.*



No one wants to think about suffering a loss. In the unfortunate event you do have a loss, our **ANPAC Five Star Claim Service<sup>®</sup>** is designed to provide assurance and confidence to our policyholders throughout the claims process.

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