

# FIRE SAFETY ALERT - HAY BALE STORAGE



## Fire Safety—Baling and Storing Hay

With a wet spring and summer in most areas of the state, the cutting and harvesting of hay has been impeded; leading to an increased risk of hay-related fires. Moisture content is the primary factor in the spontaneous heating and eventual combustion of hay. The decomposition process in higher moisture hay generates enough heat to produce combustible gases, which will eventually ignite if sufficient temperatures are reached.

## The Numbers

- Heating occurs in all hay that is above 15% moisture. The temperature can get as high as 125 to 130F three to seven days after it has been baled and should decrease to safe levels in the next 15 to 60 days.
- If the internal temperature of the bale rises above 130F, decomposition begins; producing combustible gases that can ignite if the temperature gets high enough.
- As the decomposition process continues and temperatures inside the bale reach 150F, conditions are favorable for rapid heat build-up and a spontaneous fire.
- Temperatures above 190F indicates fire is imminent.
- Temperatures 210F or higher will produce glowing spots in low light conditions.
- Temperatures 230F or higher indicates smoldering combustion.



## Precautions That Can Be Taken

If you notice a musty smell, this indicates that the hay is beginning to heat. Check your hay regularly with moisture meters and temperature probes. A simple probe can be constructed using 1/2" galvanized conduit, shaped to a point on one end. Drive the conduit into the stack and insert a thermometer on a string. Leave the thermometer in place for a least 10 minutes to get an accurate reading. Do this in several locations for an accurate sampling of your stored product.

## Important

- **Notify** fire officials immediately if you suspect a spontaneous fire situation in stored hay.
- Do not store chopped hay or chopped cornstalks in haymows.
- Do not store bales against or near buildings. Store them in separate stacks of smaller size to reduce the loss potential if a fire occurs.
- It is advised to **not** store hay in the same building as farm machinery and shop equipment.