

What Happens When Hay Heats? *by courtesy of Frank Mickan*

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DETERMINING STACK TEMPERATURE

“Keep an eye out for signs of your haystack is heating”, says Frank Mickan, Pasture and Fodder Conservation Specialist, NRE, Ellinbank. Steam condensation on the roof, mould growth, acrid fumes, and hot & humid air at the top of the stack are all good indicators. When building stacks with suspect "wet" hay, always stack the bales loosely to allow air movement through the bales. Also spread the stack over a wide area ie. over several bays, thereby reducing heat build-up. Most heating will occur over the first 1 – 2 weeks but has been known to reach “flash point” up to approximately 8 weeks after baling.

How can I determine stack temperature?

Monitor the stack temperature regularly from when heating is first noticed. Do this using a pipe or crowbar inserted into as deep as possible into the stack. A thermometer lowered down the pipe will give you an accurate and quick reading of the internal stack temperatures. The crowbar, when pushed into the stack and left there for two hours, can be felt by hand to give you a rough guide of the internal stack temperatures.

The temperature is up to about 50°C if you can hold the bar without discomfort. It is up to 60°C if the bar can be held for a short time only and up to 70°C if the bar can be touched only briefly. If you can't hold the bar, temperature is above 70°C and fire is a real possibility. Treat the stack with caution!

What can be done if hay heats to danger levels?

Pull the stack apart as quickly as possible. Avoid walking on the stack if possible because the extremely high temperatures may have charred the centre of the stack. This won't be seen from the outside. Your extra weight on top of the stack might be enough to cause the top of the stack, and you, to collapse into the extremely hot centre. Please believe me when I say that it will be a lot more serious than just having your hair singed! Be aware that as the bales are pulled out, especially in a tightly built stack, that oxygen can now get to the hot spot more quickly, and may actually result in starting a fire. Have the local fire brigade on hand, and if not at least a fire cart and other people for safety reasons!