

# Haystack fire Handy hints

Haystack fires have a range of causes such as lightning strikes, sparks from equipment and machinery and deliberately or accidentally started. However, many haystack fires self-ignite for no apparent reason. This is called spontaneous combustion and is the leading cause of haystack fires in Australia. Spontaneous combustion can occur in a stack of any size or in a single bale which is too moist.

Haystack fires can happen in any type of bale stored in a haystack. Even hay stored as single bales can spontaneously ignite under some conditions. Haystack fires can spread quickly into the surrounding area and often result in thousands of dollars of damages.

## Some important points to remember before cutting & storing hay:

1. The node should be fully booted (emerged) from stem sheath prior to cutting. Depending on the variety (slow or fast maturing varieties) the node may sometimes not be fully emerged, in which case the curing time must be longer to ensure no moisture is present within the nodes.
2. Moisture is stored in the node within the stem of the plant. If the stem is not crimped/cracked (by using a mower conditioner or a super conditioner) the moisture will not escape as quickly and curing times will need to be longer.
3. Curing process is the key element to stopping spontaneous combustion fires. Curing times depend upon:
  - a. Density;
  - b. Size of node;
  - c. Condition of hay;
  - d. Use of a mower conditioner to cut hay;
  - e. Size of windrow; and
  - f. Weather conditions.
4. An effective curing test available to farmers is to use the "hammer test" ie; squashing the node between two metal surfaces and looking for any moisture from the crushed node. If ANY moisture appears, this hay is not ready for baling.
5. Moisture:

After hay is cured (and no moisture is present in "hammer test"), hay bales should not be baled with moisture contents greater than 15% (for cereal hay – oats or wheaten hay, etc).

*If hay is not cured to the point at which no moisture is present at "hammer test" stage, the moisture reading will not be a true reflection of the moisture content.*
6. If the hay has a slight caramel odour/strong musty smell/strong burning odour or visual vapours, you should investigate the source of the odours and take appropriate actions. These are strong indicators that a spontaneous combustion fire may occur.

## Practical things you should do to reduce fire risk.

- **Spread your risk** – haystacks in the open air should be limited to \$50,000 value in total **or**, 400 bales (based on large square 8x4), **or** 250 tonne maximum per stack.
- Always ensure that there is a **20 metre debris free clearance** surrounding hay stacks or sheds (graded/cleared to ensure sufficient clearance).
- Hay stacks in the open air should have a **minimum 50 metres clearance between each stack**; 40 metres of graded clearance (20 metres surrounding each stack) and 10 metres in between graded areas (stubble only).
- **Remove all ignition sources from hay sheds** for example fuel, fertiliser, power sources (such as batteries) or chemicals etc.
- **All machinery should be removed from hay sheds** to ensure equipment is not put at risk by fire and therefore increasing your loss and potential hardship.
- Always ensure your **hay sheds are in good state of repair**, with no leaks in the roof or loose sheets as this may reduce your return due to water damaged bales.

Even if you take all the possible precautions to prevent haystack fires, losses can still occur, therefore, you should ensure you have the adequate level of insurance protection just in case the unthinkable happens. It is a good time to check your insurance policies to ensure your hay, hay sheds and machinery are adequately covered.

If you would like to review your insurance policies or you would like further information about other practical measures you can put in place to reduce the risk of haystack or shed fires please contact your WFI local Area Manager on **1300 934 934**. Or alternatively you can visit **wfi.com.au**.

*\*This information has been provided as a guide only. Please see source overleaf.*

This information has been prepared based on information published by:

1. Country Fire Authority of Victoria (CFA), 2011, Preventing Haystack Fires <http://www.cfa.vic.gov.au/firesafety/farming/hay.htm>
2. Department of PRimary Industries, 2008, Haystack Fires (Spontaneous Combustion) <http://www.dpi.vic.gov.au/agriculture/dairy/pastures-management/haystack-fires-spontaneous-combustion>
3. Muller. F, 2008, 'Hay fires burn stacks', Farming Ahead, No. 202, p. 56.

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