



# ZULULAND NORTH EXTENSION NEWS



## MANAGEMENT OF FROSTED CANE

Although winter months are mild in the Zululand North region, we recently experienced levels of frost damage during the first week of July. Crops of different ages, and especially valley bottom fields, show notable frost damage with leaves already showing a slightly greyish appearance as they start to dry out.

To determine the degree of injury, one must cut the cane stalk longitudinally – through the spindle and growing point.

**Four main stages of injury may be recognised on cane with >50cm stalk (Millable cane):**

Level of damage	Symptoms to the plant	What to do
<b>Stage 1</b>	<ul style="list-style-type: none"><li>• Partial meristem damage.</li><li>• Die-back of leaves.</li></ul>	<ul style="list-style-type: none"><li>• Re-growth will occur inside the spindle after a few weeks.</li></ul>
<b>Stage 2</b>	<ul style="list-style-type: none"><li>• Meristem killed and a few buds below the natural breaking point.</li><li>• 40% of the leaves turn brown.</li></ul>	<ul style="list-style-type: none"><li>• Can delay harvest by 3 weeks.</li><li>• Top below the damaged section of the stalk.</li><li>• This cane can be used as seed if options are limited!</li></ul>
<b>Stage 3</b>	<ul style="list-style-type: none"><li>• Top six buds below the breaking point and all the green leaves are dead.</li></ul>	<ul style="list-style-type: none"><li>• Cane must be harvested without delay.</li><li>• Top below the damaged section of the stalk.</li></ul>

**Stage 4**

- Most of the buds on the stalk are killed, the internodes turn glassy.
- Deterioration is extremely rapid.
- Cane should be harvested immediately.
- Do not use this cane as seedcane.

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Recommendations for unmillable cane with <50cm stalk:

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<b>Age</b>	<b>Management decision</b>
<b>Older than 6 months</b>	<ul style="list-style-type: none"><li>• No need to cut back except on farms/fields where eldana is a threat.</li><li>• Apply half the normal rate of fertiliser.</li><li>• Keep weed free.</li></ul>
<b>Younger than 6 months</b>	<ul style="list-style-type: none"><li>• May cut back.</li><li>• No extra fertiliser is required.</li><li>• Keep weed free.</li></ul>

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**NB.** Any millable cane (more than 500 mm of stalk) with meristem damage, or with more than 40% loss of canopy due to frost, must be harvested immediately after the frost. If not harvested, or you do not have millable stalk, the new growth will be in the form of sideshoots and bull shoots during the subsequent season. Unfortunately crops of poor yield and quality can be expected from these fields, so in most cases it is best to cut back/mulch this cane.

The recommendation is that:

- Frosted cane should be managed according to the degree of damage experienced.
- Consider the length of stalk, to determine whether the cane is millable.
- The cane became millable after about 8 months of age. If in doubt, it is better to mill frosted cane and allow the ratoon to regrow during the optimum growth period.

- Depending on degree of damage, frosted cane should be harvested as soon as possible, 2 to 3 weeks before it develops the side shoots which will affect the RV due to cane deterioration.
- Short cane generally has an open canopy and is thus more vulnerable to frost damage.
- Eldana levels are likely to increase rapidly in mature frost damaged cane if it is carried over.
- The use of frost damaged cane as seed should be avoided except and only when options are limited.
- Young plant cane and ratoons suffer little damage, even with severe frost. Therefore, the crop will regrow.

*If you require further assistance with evaluating the situation, please don't hesitate to give me a call.*

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**Our mailing address is:**

SASRI Extension Office - Zululand North  
Mimosa Court, 13 Turnbull Street, Empangeni  
PO Box 180, Empangeni 3880

**Contact:**

Tshifhiwa Radzilani  
Cell: 082 653 3150  
Office: +27 35 772 5871 +27 35 792 2680  
Email: [Tshifhiwa.Radzilani@sugar.org.za](mailto:Tshifhiwa.Radzilani@sugar.org.za)