

# Tropical Storm Preparedness for Apple Orchards

[Tropical Storm Chris](#) could approach Nova Scotia by Thursday. Although weather statements have been lifted, the track of the storm system is still uncertain. The following are recommendations to help you prepare for damaging winds, should they occur. Preparedness before and after a storm can improve your opportunity for a rapid recovery.

## Main Concern is a Fire Blight Trauma Event

Wind that damages plant tissues is a fire blight trauma event in which fire blight bacteria have access to open wounds to enter and infect tissues. I have reached out to Dr. George Sundin to ask for his recommendations. In summary, streptomycin provides optimal control when applied within 12 hours of a trauma event. This early timing targets bacteria that have entered shoot tips before they spread further and initiate a significant infection. Application up to 24 hours after trauma is still good but is likely not as effective as early treatment. Include Agral 90 surfactant at 500 mL per 1000 L as a spreader/sticker to improve efficacy.

Streptomycin should not be used as a preventative treatment in the case of a tropical storm and should be saved for post-infection activity. If applied before trauma, streptomycin can be washed off leaves, degraded by sunlight, and will not provide protective activity if bacteria is moved in from outside the orchard.

Do not rely on Kasumin for a trauma event because this antibiotic is not systemic and will only kill cells on the surface of leaves and shoots. Meaning, any bacteria that moves into tissues will not be affected by Kasumin or copper.

Apogee could be applied immediately if not already applied. Dr. Sundin has reasoned that even though the potential storm is too close for the protective effects of Apogee to kick-in, the eventual protective activity may limit systemic spread of the fire blight bacteria in infected shoots.

## Is Your Orchard at Risk of Fire Blight Trauma?

Keep in mind that there are enough cells in 1 ooze droplet to infect an entire orchard if tissues are damaged and high winds drive bacteria into wounded tissue. Fire blight bacteria could be assumed a risk in all orchards, especially if a rotating storm system with wind and rain moves bacteria around and between orchards.

## Storm Preparedness – are you ready?

- Young trees can break in high winds if they have not been tied to support systems. Train young trees as quickly as possible before the storm is expected.
- Have streptomycin available to treat orchards within 24 hours of exhibiting damage to foliage or limbs.
- Ensure that equipment is accessible if it will be needed for recovery, including saws, shovels, fuel, equipment parts, and knowledge of the location and cost of other equipment.

Note: A long-term strategy for storm preparedness includes insurance coverage for equipment and orchards, windbreaks, continuous pruning of fire blight infections, and a regular pruning program to control tree size and improve air movement.

