HealthyForest PARTNERSHIP

About the Healthy Forest Partnership

The Healthy Forest Partnership strives to keep our forests green and healthy by protecting them from a spruce budworm outbreak.

The research initiative and partnership started in 2014 and is comprised of researchers and representatives from academia, government (provincial & federal), and industry working in collaboration to slow budworm population growth.

The initiative, known as the Early Intervention Strategy (EIS), focuses on monitoring, detecting, and treating areas of low, but growing, populations of spruce budworm in Atlantic Canada to prevent them from reaching outbreak levels.

What is the Status of the Spruce Budworm in Eastern Canada?

A spruce budworm outbreak started in Quebec in 2006 and has since grown to 13+ million hectares in size, an area larger than the combined forests of New Brunswick and Nova Scotia. The growing budworm outbreak in Quebec influences populations in neighbouring jurisdictions through both short- and long-range moth dispersal. These dispersal events can contribute to the establishment of new populations hundreds of kilometers from where they began.

- Low but rising budworm populations have been present in northern portions of New Brunswick since 2013 and treatments have been conducted annually since 2014. Annual surveys have indicated that less than 500 hectares of trace to light defoliation has been observed in most years since then due in large part to the successful EIS treatments.
- On the island of Newfoundland EIS treatments began in 2020 after moth dispersal events from Quebec in 2018 and 2019 contributed to the establishment of populations.
- In 2020, Newfoundland mapped over 3,300 hectares of moderate defoliation from spruce budworm. This is the first time defoliation has been mapped on the island of Newfoundland since the last major outbreak.
- Populations in Nova Scotia remain low, however, extensive monitoring shows some increases in spruce budworm levels. Coupled with the ongoing potential of long-range moth dispersal, future management is anticipated.
- Updated areas of focus for the EIS program can be found at www.HealthyForestPartnership.ca.

Why Is This Important?

An uncontrolled spruce budworm outbreak in Atlantic Canada could result in the following:

1. $15.3 billion in direct and indirect losses to the economy over 40 years.
2. The loss of 57,000 person-years of employment.
3. Annual losses of 3.2 million m3 in wood supply over 30 years (= the wood supply of 15 mills).
4. As trees die, the carbon they store is released into the environment and important carbon storage is lost (30 years of accumulated storage loss is equal to 14+ million passenger vehicles driven for one year).

Follow our research, progress, and treatment areas at www.HealthyForestPartnership.ca
or call our toll free number 1-844-216-3040 to leave a message.

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About the Strategy

What are the Options?

1. Do nothing and suffer economic and environmental consequences.
2. Silviculture (pre-outbreak).
3. Salvage dead and dying trees after the outbreak starts.
4. Keep as many trees alive as budgets allow (traditional reactive foliage protection).
5. Intervene early using EIS by targeting low but growing populations of budworm to reduce populations before they build to devastating levels (proactive early intervention).

What is the Plan?

- Protect Atlantic Canada's forests by being proactive and treating "hotspots" before they build into large infestations, as recommended by the Early Intervention Strategy.
- Pursue supporting research to refine methodologies and understand additional environmental impacts of spruce budworm outbreaks.
- Continue to use the Healthy Forest Partnership collaborative to engage communities, stakeholders, and rights holders to advance this important work.

What About the Environment?

A spruce budworm outbreak in Atlantic Canada would have significant impacts on the forests in this region and the many values (ecological, economic, socioeconomic, biodiversity) derived from them.

- Three products are used under the EIS research treatment project. They include: 1) a hormone-imitating control product called tebufenozide; 2) a bacteria-based control product called *Bacillus thuringiensis*; and 3) a pheromone-based mating disruptor called $CONFOUND_{SBW}$. These insecticides are federally and provincially approved and have been used in other jurisdictions for similar purposes.
- Spruce budworm is the only species being targeted by the treatments and the insecticides used are not harmful to humans or other mammals, birds, bees, or fish when used according to label directions.
- Applications occur in the upper canopy of spruce and fir trees and are timed so that maximum control of spruce budworm can occur at minimal dosage. This helps ensure responsible use.
- Insecticide control products can only be used in Atlantic Canada after they have undergone an extensive scientific review by Health Canada that includes health and environmental assessments, including consideration of potential risk to drinking water.
- All products have gone through extensive testing and are registered for use.
- Permits to apply aerial treatments dictate such things as safe usage, public notification requirements, setbacks from structures such as home, power lines, etc., and appropriate use around water bodies and other sensitive areas (such as point of intake for a municipal drinking watershed area). Applicators within each jurisdiction are legally required to follow the requirements of these permits to ensure safe usage.