

Aerial Spraying in B.C.'s Forests

What insects are being treated?

B.C.'s forests are home to many defoliating insects, which are insects that eat the leaves of trees and shrubs. Although most of them cause little to no serious damage to the plants they feed on, there are a few species that can be harmful to the health and productivity of forests.

The BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD) is concerned with lessening the damage and protecting our trees from the following moths:

- Western spruce budworm
- Douglas-fir tussock moth
- Western hemlock looper

Why are these moths a concern?

These moths are aggressive feeders and can strip the leaves from their host trees (defoliation). The damage from this defoliation can cause growth loss, stunted growth, stem deformities and even the death of the tree.

Human exposure to airborne Douglas-fir tussock moth hairs, silken threads, and shed skins during large-scale infestations have caused allergic reactions such as skin rash and possible upper respiratory tract symptoms. Moth population outbreaks usually occur in low lying areas that are often populated by people. Exposure can cause discomfort and inconvenience to people who live in affected areas.

How are these moth populations being controlled?

Many methods are used to monitor defoliator populations in B.C. These methods include pheromone trapping, egg counts, and defoliation mapping to monitor populations. Aerial spraying with Foray 48B® is used for minimizing damage caused by defoliator populations over large or difficult-to-access areas.

Foray 48B® is a water-based product containing a bacterium called *Bacillus thuringiensis* variety *kurstaki* (Btk). Btk is found naturally in the soil and is known to cause illness in many insect larvae when ingested, including caterpillars of pest species such as the gypsy moth. Larvae are most susceptible to Btk when they are in the early developmental stages.

Foray 48B® also contains a number of inert (inactive) ingredients that improve the performance of the Btk. Many of these ingredients are approved food grade additives. No petroleum products are used.

Foray 48B® is not toxic or harmful to people, dogs, cats, fish, birds, reptiles, or insects such as honeybees, beetles, or spiders. Pest control products containing Btk have been registered for use in Canada for about 40 years. It is now the most widely used pest control product in the world.

What happens during aerial spraying?

Aerial spraying of Foray 48B® is usually done in the early summer from early June to mid-July depending on the insect species and the weather. Spraying takes place very early

in the morning at dawn. Spraying may continue throughout the day as long as the weather is suitable. Each area is usually treated only once during a season. These applications are timed to treat caterpillars when they are most vulnerable to the effects of Btk. Depending on the size of the treatment area, the aircraft used and weather delays, it may take several mornings to complete one application.

The treatment area may appear larger than it actually is because the aircraft make turns in areas outside of the treatment area. Spraying is carefully controlled by GPS navigation equipment and only occurs over designated areas.

You will not be directly told of the timing of the aerial spraying, but the general treatment period will be posted on signs near the treatment areas. For more information on treatment dates by location, visit the FLNRORD website: www.for.gov.bc.ca/rsi/ForestHealth/Defoliator_Program.htm.

You may notice a musty smell and spray droplets on hard surfaces and windows after the treatment. Droplets can be removed with water and a bit of scrubbing, but will eventually disappear on their own.

Are there any health concerns?

Two extensive public health studies monitored the impact of spraying on reported illness in Vancouver and Victoria. Results

show no increase in illnesses reported by health care providers (including hospital emergency room visits.) There is no evidence of harmful effects in adults and children with asthma or with weakened immune systems.

If you wish to avoid contact with the spray, it is recommended that you close windows the evening before aerial spraying takes place and stay indoors while your property and nearby areas are being sprayed. You should wait until the spray has dissipated (dispersed) from the air (usually within an hour, sooner in windy conditions) before going outdoors. If you have health conditions and are concerned, you should speak to your health care provider.

In addition to staying indoors during the spraying, you should also follow standard good hygiene practices. These include:

- Wash your hands after any outdoor activities
- Wash all fruits and vegetables gathered from the affected areas before eating or cooking

For More Information

For information about gypsy moth spraying, see [HealthLinkBC File #90a Gypsy Moth Spraying](#).