



South Fraser
Health Region

Healthy Individuals
Healthy Communities

QUESTIONS AND ANSWERS ABOUT "BTK" AND HEALTH

Introduction

The BC Landscape and Nursery Association plans to carry out a pesticide spray program in the North Delta area in the next few weeks to eradicate the North American Gypsy Moth. Foray 48B, a bacterial insecticide, will be applied to about 40 hectares in an area of north Delta, bounded by 114th Street to 118th Street and 86th Avenue to 89th Avenue using a ground-based treatment. The application of Foray 48B has been authorized by the Delta Municipal Council to combat an infestation of the Gypsy Moth. Local residents in the area will be given the opportunity to have trees on their property treated. The implications of an infestation of Gypsy Moth, an imported pest species, are believed to be serious enough to warrant eradication.

What is Foray 48B?

Foray 48B is a water-based product containing a bacterium called *Bacillus thuringiensis var. Kurstaki (BtK)*.

This bacterium is a biological pest control agent found in nature as a normal resident of soil. In order to work, the bacterium must be eaten by the Gypsy Moth caterpillar. The conditions for the BtK to work are found only in the stomach of moths and butterfly caterpillars. These conditions are not found in animals, birds and other desirable insects such as bees, beetles and spiders.

In addition to the bacterial ingredient, Foray 48B contains a number of so-called *inert* ingredients, including stickers and binders that help the spray remain on vegetation after it is applied.

Who is responsible for determining that Foray 48B products can be used in Canada?

In Canada, pest control products must be reviewed and registered by the Pest Management Regulatory Agency (PMRA), a federal agency attached to Health Canada, before they can be sold or used. In the United States, this function is performed by the U.S. Environmental Protection Agency (EPA).

Although the exact identity of the *inert* ingredients is considered a trade secret and not made public, they must be disclosed to the PMRA before the product can be sold in Canada. After reviewing toxicity information on the BtK and the inert ingredients in Foray 48B, both the Canadian PMRA and the U.S. EPA have registered Foray 48B for aerial application over inhabited areas.

Is this the first time Foray 48B will be used?

This is not the first time 48B has been used. This product has been applied on many occasions in Canada, the United States, and elsewhere over the last 25 years. It has been applied previously by aircraft in Burnaby as well as in other areas of the Lower Mainland, Vancouver Island and the Okanagan. In this application it will be applied as a ground-based treatment using a truck and sprayer hose and backpack sprayers.

Are there any risks associated with the Gypsy Moth?

Carefully considered, it is difficult to identify any situation that is risk free. There are well-documented cases of allergic reactions to the Gypsy Moth caterpillar in areas where this pest has become well established. Currently, levels of Gypsy Moth infestation in the North Delta area are well below the level where outbreaks of illness have been caused.

Are there any risks associated with the Eradication program?

Health Canada scientists have concluded that BtK-based products pose little threat to human health through either handling products directly or being exposed to them indirectly such as during a spray program, and therefore they continue to be registered for use in Canada.

What should I do during the spraying?

There will be three applications of Foray 48B at about 10-day intervals until the end of May 2001. Spraying will only be done on days when the weather is suitable (i.e. no rain and wind). Residents in the area to be treated will be advised at least 24 hours in advance of the day on which spraying is planned, if weather forces cancellation, spraying will be rescheduled.

It is recommended that residents who have authorized spraying on their property remain indoors while spraying is being done on their property. This is general advice. No additional measures are required for any identifiable subgroups of the population. If an individual has a personal medical problem that he/she believes may be made worse by the spraying, the individual should seek the advice of his/her personal physician.

What could happen if I am exposed to the spray?

If you consume vegetables (produce), you have probably already ingested this bacterium. It is commonly used on commercial produce and may also be found on organically grown produce. If you have agreed to have trees on your property sprayed, you may wish to hose off or cover your playground equipment, benches, lawn chairs, etc. to minimize general exposure to skin.

The results of the public health surveillance during the spray programs in the Lower Mainland and elsewhere have not demonstrated any increases in human illness to spraying of Foray 48B.

Do children, pregnant women or the elderly require special attention?

All the preceding information applies to children, pregnant women and the elderly. If there are respiratory problems or allergies, staying indoors on each spray morning should minimize exposure to the spray droplets. Children should be discouraged from playing with any Gypsy Moth caterpillars if they find them, as their spiny hairs can cause welts or a patchy rash to occur which can persist for 4-5 days.

What about the immunocompromised?

Concerns raised about the potential harmful effects of organisms in individuals with an impaired immune system are not supported regarding *Bacillus thuringiensis var. Kurstaki*.

Summary

It is important to note that the action of BtK is very specific to caterpillars. The application of this product will be on a smaller scale than was used in Burnaby, Victoria and other parts of the Province and will be from truck and back-pack equipment, minimizing exposure. Residents having trees on their property sprayed may wish to remove or cover lawn furniture and other accessories in the immediate area where treatment will be applied.

If you have any health related questions/comments regarding the gypsy moth spray program, please contact the South Fraser Health Region public information line at **572-2655**.

This information is based on a March 1999 Capital Health Region document and an April 2000 Simon Fraser Health Region document.