

TO: CITY MANAGER

DATE: 2000 02 02

FROM: DIRECTOR ENGINEERING

FILE: 60-05-01

SUBJECT: PROPOSED GYPSY MOTH ERADICATION PROGRAM

PURPOSE: To Provide Information on the Category of Ingredients in Foray 48B in Connection with the Proposed Spray Program.

RECOMMENDATION:

1. THAT this report be received for information purposes.

REPORT

INTRODUCTION

At the Regular Council Meeting on 2000 January 17, Council received a staff report on the proposed Gypsy Moth eradication program. Arising from the discussion, Council adopted a motion for staff to investigate and report on the actual ingredients of Foray 48B or if that information is unavailable, the category of ingredients contained in the spray.

At the 2000 January 24 Council Meeting, Council received additional correspondence on the aerial spraying for gypsy moth control. Arising from the discussion, Council requested staff to provide information on recent reports released on the health effects of BtK more specifically related to an article in the publication titled "New Scientist" which discusses effect of BtK on human cells.

This report is to provide the results of recent discussions between staff and Abbott Laboratories, the Province and the Simon Fraser Health Region on the subject matters raised by Council.

PESTICIDE FORAY 48B

Information on Foray 48B constituents is obtained from the following sources: information received from the B.C. Ministry of Forests, discussion with a staff person from Abbott Laboratories Ltd., review of the reports titled "Health Risk Assessment of the Proposed 1997-1998 Control Programme for the White Spotted Tussock Moth in the Eastern Suburbs of Auckland" and "Human Health Surveillance During the Aerial Spraying for Control of North American Gypsy Moth on Southern Vancouver Island, B.C., 1999" and Material Safety Data Sheet for Foray 48B.

Foray 48B (PCP# 24977) is a registered product under the Pesticide Control Products Act for the specified use. It is produced through a fermentation process. The product label indicates that 2.1% of the product is *Bacillus thuringiensis var. kurstaki* (BtK) and the remaining 97.9% is listed as "inert" ingredients, also known as formulants.

According to published information made available to staff, these inert ingredients include water, fermenter concentrate solids (residues of the medium on which the BtK is grown such as starches, glucose, or sucrose, proteins), preservatives which prevent contamination growth by other bacteria and yeasts, pH regulators, and stickers and binders that help the spray remain on the foliage after it is applied.

The Auckland study examined the Abbott formulation of Foray 48 and indicated that the largest portion of the inert ingredients is water (>70%), followed by the residual materials from the fermentation process (10-20%) and the remaining amount being the stabilizers and other ingredients which are proprietary information unavailable to the public.

Some elaboration of the inert ingredients can be found in the Southern Vancouver Island Study which states that:

“ The Foray 48B formulation contains a number of intentionally added inert ingredients, also known as formulants. There are a variety of purposes for these compounds which include stickers and binders that help the spray remain on vegetation after it is applied, and compounds to reduce product contamination by other bacteria or yeasts. While the specific ingredients are considered proprietary information, some insights can be gained by a review of the general methods of Btk cultivation and by regulatory requirements. Many of these formulants are found in the US EPA lists of other (inert) pesticide ingredients including List 3 (unclassifiable as to toxicity), List 4A (minimal toxicological concern) or 4B (minimal concern under prescribed conditions of use). However, the nature and amounts of specific inert ingredients can vary between commercial products and are, therefore, considered trade secrets. Compounds in Foray 48B could include residues of the leftover bacteria food such as starches, glucose or sucrose, proteins (usually from corn or soy), water, and a sticking agent. Other food grade materials such as sodium hydroxide and potassium phosphate may be found as basic ingredients of the growth media used to produce Btk bacteria. Chemicals, such as antifoaming agents, may be added to facilitate the growth and recovery of cultivated organisms. Other compounds, including bacterial metabolites, are present but in much smaller quantities. ”

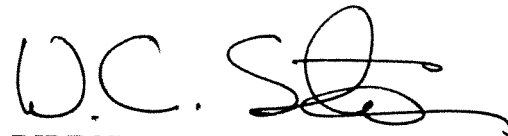
The inert classification system was developed by EPA in 1987 which consists of 4 categories - List 1 : inerts of toxicological concern, List 2 : inerts are potentially toxic with a high priority for testing, List 3 : inerts of unknown toxicity and List 4 : inerts of minimal concern.

HEALTH ASSESSMENT REPORTS ON BtK

Staff have requested Simon Fraser Health Region to evaluate recent reports on the health effects of BtK and more specifically, an article in the publication titled "New Scientist" which discusses effect of BtK on human cells.

A separate report will be submitted to Council on this matter upon receiving the requested information from the Simon Fraser Health Region.

This is provided for Council's information.


DIRECTOR ENGINEERING

DD:
Attachments

cc: Director Planning and Building
Director Parks, Recreation & Cultural Services
Medical Health Officer, Simon Fraser Health Region

