

B

ugs & Diseases



April 1998

info note

Smaller budworm spray program in 1998

In the Northwest Boreal Region (NWB), approximately 6800 hectares of spruce budworm infested white spruce stands have been targeted for spraying in 1998. These stands, located in the Cameron Hills west of Steen River, will be sprayed with two applications of B.t. in early June. Results of the second instar surveys indicate moderate to severe budworm defoliation within this area for 1998.

This year's spray program will be the smallest program since 1993 due to the significant decrease in budworm populations over the last three years. This decrease is directly attributable to the success of large scale spray programs in the last three years. ■

*Mike Maximchuk
NWB Forest Health Officer*

AFPOWS predicts pest problems

Alberta Forest Pest Outbreak Warning System (AFPOWS) is a pro-active program that is designed to detect potential outbreaks in the early stages so that action can be taken before they become serious problems. Major forest pest outbreaks can

cause severe losses to the forest resource. The last outbreak of the mountain pine beetle during the late 1970's and early 1980's killed over three million mature lodgepole pines in Alberta.

Did you know...



... AFPOWS has been successful in keeping mountain pine beetle at bay in Alberta since its last outbreak. Similarly, budworm populations are continually monitored throughout the province under this program.

AFPOWS is composed of the following:

- ◆ Pheromones/ baits - a low cost means of monitoring changes in pest populations. These work at relatively low population levels and are deployed in the field before the peak flight period of the target pest;
- ◆ Annual aerial surveys - to detect new pest outbreaks of major forest pests, such as spruce budworm and mountain pine beetle;
- ◆ Ground surveys - to predict changes in specific pest populations in selected forest stands, usually by tracking the juvenile stages. For instance, L2 surveys are employed for spruce budworm and egg bands help to track forest tent caterpillar.



AFPOWS data will be available in the currently developed Forest Health website. ■

*Sunil Ranasinghe
Forest Entomologist*

Pest surveys continue in NEB

The Northeast Boreal (NEB) region will continue with its insect and disease monitoring program with a focus on gypsy moth, spruce budworm, and forest tent caterpillar. Aerial surveys of defoliation by spruce budworm and forest tent caterpillar will be conducted during the summer with the cooperative efforts of the CFS.

The design of the forest tent caterpillar monitoring program will be altered from last year. In 1997, three types of pheromone traps were deployed. This summer only the Multi-Pher I® and Delta® traps will be used. At each of the 10 sites, two traps of each type will be baited and one trap of each type will be unbaited. ■

*Sarah Schwartz
NEB Forest Health Officer*

Staff survey NWB forests for pests

Northwest Boreal Region (NWB) district and regional staff will be participating in a number of aerial and ground forest health surveys in 1998. Information from these surveys will help to determine the pest incidence, distribution and associated damage to the forest resource.

Aerial surveys will be conducted to record the extent of spruce budworm, spruce beetle and aspen defoliator damage. Ground surveys will include a young stand survey, a second instar survey for spruce budworm, and pheromone trap

surveys for spruce budworm, forest tent caterpillar and gypsy moth. ■

*Mike Maximchuk
NWB Forest Health Officer*

LFS developing manual on forest pest surveys

The Forest Health Branch is currently preparing a manual on aerial surveys. The Forest Insect and Disease Survey (FIDS) of the Canadian Forest Service (CFS) has been disbanded and will no longer be involved in carrying out regular aerial surveys on forest pests.

Land and Forest Service (LFS) will be taking over this task and this manual will help to standardize aerial survey procedures. Forest Health Officers are responsible for coordinating the surveys within their regions. Technicians from CFS, Forest Health Network will continue to train LFS personnel on aerial survey techniques. ■

*Sunil Ranasinghe
Forest Entomologist*

Wandering River hosts I&D Working group

The Northeast Boreal Insect and Disease (I&D) Working Group met on March 23rd in Wandering River. *Dave Fox* volunteered to be the industry Provincial Integrated Pest Management Committee representative. The group discussed the option of establishing new plots for spruce budworm pheromone monitoring west of Fort McMurray. *Roger Brett* from the Canadian Forest Service explained projects that they are currently involved in. The group dispersed following the viewing of the new LFS dwarf mistletoe video. ■

*Sarah Schwartz
NEB Forest Health Officer*

New I & D committee meet for first time in 1998

The Provincial Integrated Pest Management Committee (PIPMC) met on January 15, 1998. Committee meetings will be open to any individual who is interested in the subject. The group will meet at least once a year, and the annual meeting will be held in the summer before August 15.

The committee mandate

Its main responsibilities are to:

- ◆ Facilitate the communication of Regional Working Groups' IPM initiatives to other groups;
- ◆ Coordinate efforts to avoid duplication of similar initiatives;
- ◆ Transfer results of regional initiatives and other technical information;
- ◆ Establish provincial standards for data collection, evaluation, and data base maintenance of forest health work.

Hideji Ono will be the chairperson for 1998. Next meeting will be August 10, 1998, in Edmonton. ■

Hideji Ono
Forest Health Branch Manager

New bacterium lights the way to biocontrol!



Exciting news in the world of biological pest control was released by a team of scientists from the United States. They have developed a new, effective bacterium that can be used against a wide variety of insect pests.

This bacterium, *Photorhabdus luminescens*, is carried to the target pest through the gut of an insect-invading nematode (soil-dwelling round-worm). Within the insect, this bacterium releases a toxin that is so potent that only one cell can kill the pest! Dead bodies of the insect glow in the dark as a result of luminescent properties of *P. luminescens*.

The development of this group of insect-killing bacteria is important because of concern about some insects starting to show resistance to the widely used *Bacillus thuringiensis* (B.t.) toxin. ■

Jennifer Lukianchuk
Forest Health Technical Assistant

Spark up your I & D identification skills

Do you wish that you knew a little more about the common forest insects, diseases and weeds? A one day Forest Health workshop in your region could potentially give you the opportunity to learn more about them. If you are interested, please contact your regional FHO. ■

Jennifer Lukianchuk
Forest Health Technical Assistant

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Bugs & Diseases informs LFS, Industry and other forestry-related personnel about current forest health issues.

Articles and ideas are welcome!
Submission deadline is the 15th of the month before publication.

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Please contact editor before citing an article.

I&D posters - hot off the press!

Two new identification posters loaded with colour pictures of the major insects and diseases of Alberta have been developed by the combined efforts of the Forest Health Branch and CFS. They are written in both English and French text and are available to staff, industry and the public. These posters will be distributed to Regional FHOs some time in April. ■

*Jennifer Lukianchuk
Forest Health Technical Assistant*

Name that Forest Health acronym

The Forest Health Branch is looking for a catchy acronym to name the Forest Health component in the new divisional computer system. Each letter of the acronym should spell a word related to forest health. For example, the fire component called "FIRES" is: Fire Information Resource Evaluation System.

Send submissions to Chris Kominek by May 1, 1998. The person who produces the winning acronym will receive a personal copy of the CFS publication, "A field guide to forest insects and diseases of the prairie provinces". ■

Spin up a Forest Health website

In the summer, the Forest Health section of the Forest Protection website will be accessible to staff, industry, (external site only) and the public (external site

only). The website will contain information on quarantine pests, current forest health conditions, and project updates (internal site only).

Internal (government) site:

<http://www.env.gov.ab.ca/~env/lfs/fpd/fp.html>

External (public) site:

<http://www.gov.ab.ca/~env/lfs/fpd/fp.html>

Virtual Library - forestry site

This site is part of the international World Wide Web Virtual Library which is a linked collection of various subjects. The Forestry site includes forest health related topics, such as Entomology, Health and Air Pollution.

<http://www.metla.fi/info/vlib/Forestry/Topic/>

Non-infectious diseases of trees site

Even if signs of insects or disease are present on a tree, a non-living agent may be the underlying cause of its poor health. Check out this US site which helps to identify some of these conditions.

<http://willow.ncfes.umn.edu/ht%5Fnon/>

[ht%5Fnon.htm](http://willow.ncfes.umn.edu/ht%5Fnon.htm). ■

COMING UP NEXT ISSUE...

- ◆ Summary of summer programs
- ◆ New forest health components in the divisional computer system