

Protect the trees you have with
Foray® Biological Insecticide.

Foray®
BIOLOGICAL INSECTICIDE

*The notion of managing
pests in heavily wooded
areas might seem
counterintuitive to some,
but insects can pose a
significant threat to what
are among our most
valuable natural
resources - our forests.*

Learn more...



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Trees take decades to grow.
Caterpillars could destroy them in
days.

Foray®
Biological Insecticide



You can use a biological approach to protecting your trees. Harmful caterpillar pests can defoliate your trees in a few weeks; after a few seasons of this activity, the health of your trees is affected. Reduced growth, or death of major limbs and even the entire tree can occur.

What is Foray®?

Foray was developed to protect trees from harmful defoliation caused by caterpillar pests such as the gypsy moth, tent caterpillars, bagworms and budworms. Foray is a microbial insecticide that is based upon unique bacteria known as *Bacillus thuringiensis* variety *kurstaki*, or Btk. This bacteria is naturally occurring, and it effects only caterpillars, and only after they

eat it. **Foray** is produced by fermentation in large sterilized stainless steel tanks using the same facilities and expertise, and even some of the same ingredients that are used in producing pharmaceutical products. Several of Valent BioScience's Btk products, including **Foray**, are often used by conventional and organic growers to protect their food crops.

Foray must be eaten by the caterpillars to be effective; that's why thorough coverage of the foliage by the **Foray** spray is so important. Once the Foray is eaten, it causes a reaction in the caterpillar's gut; the caterpillar stops feeding, the gut ruptures and the caterpillar dies within a day or two.



What else will it affect?

Because of the unique chemistry of the caterpillar's gut, **Foray** Btk is very selective in its activity; it will not harm other types of non-target insects, fish, birds or mammals.

What about its effect upon people living in the area?

Foray has been used to protect forested residential areas for many years across North America and elsewhere in the world. A great deal of information regarding human health has been gathered during these programs, and **Foray** has shown to have no impact in protecting forested residential areas.

If you have any specific health issues or require further information about **Foray** and its use in your neighborhood, please consult your local supplier, or the manufacturer (Valent BioSciences Corporation), or your health care practitioner.

Is Foray as effective as chemical insecticides?

Unlike commonly used chemical insecticides, **Foray** must be eaten to be effective. This usually means that there will be some foliage consumed, but then there are none of the environmental issues that are usually associated with chemical sprays. This is a trade-off that most landowners willingly make.

Foray starts to kill caterpillars within an hour or two of eating some of the sprayed foliage, but because it must be eaten to be effective, timing of the **Foray** spray is critical. So is good spray coverage. As all caterpillars do not hatch and develop at the same time or when populations are extremely high, sometimes a second application may be required.

Remember that **Foray** is a naturally occurring bacteria, and not a chemical insecticide or a synthetic. You may not see elimination of all caterpillars, but you can expect the caterpillars to stop feeding almost immediately. The few if any remaining caterpillars may continue to feed for a few days, but a properly timed application of **Foray** will



prevent significant defoliation and help maintain the health of your trees.

Where can I find more information about Foray®?

There are numerous sources for further information on **Foray** and Btk in general, including your local arborist or aerial applicator, university extension agents, or your local forestry department. You can also visit our website @ www.valentbiosciences.com for further information on Foray or any of our other microbial products.

