

Arrest the Pest Hotline: Metro 651-201-MOTH, Greater Minnesota 1-888-545-MOTH

Gypsy Moth in Minnesota - Treatments: Btk

For more information on the gypsy moth, check: [www.mda.state.mn.us/gypsy moth](http://www.mda.state.mn.us/gypsy_moth). You may also email a question or comment to: gypsy.moth@state.mn.us

ACTIVE INGREDIENT

Bacillus thuringiensis var. *kurstaki*

TYPE OF PRODUCT

Biological insecticide

HOW BTK WORKS

The active ingredient is a crystalline protein toxin formed by naturally occurring bacteria that becomes toxic when eaten by certain caterpillars. When ingested, the Btk is broken down into its toxic parts and paralyzes the caterpillar's gut. The crystals pierce the stomach of the caterpillar and spores are injected into the body which causes death.

APPLICATION METHOD

By aircraft

APPLICATION RATE

The active ingredient will be applied between 16-36 CLUs per acre. The volumetric rate will depend on the specific Btk product selected, but the range is about 0.33 and 0.75 gallons of water per acre.

APPLICATION TIMING

Btk targets the caterpillars, so for maximum effect it is applied twice just after eggs begin to hatch in May or June. Btk does not persist very long in the environment, so a second application is planned 7-10 days later to ensure that late-hatching caterpillars are treated.

IS IT SAFE?

The toxins in Btk are not activated in mammals and the *kurstaki* variety affects some butterflies and moths like the gypsy moth and tent caterpillars. To have any ill-effects, a species must be immature at the time of treatment, they must eat the Btk, and they must be susceptible to the bacteria.

Btk is produced from a common soil bacteria found worldwide. It is cultured by fermenting grains and potatoes with fish or cornmeal, a process similar to brewing beer. The final product contains water, the active ingredient, leftover growth medium, carbohydrates, and inert ingredients approved as food additives.

The bacteria breaks down quickly in sunlight, but is extremely potent to gypsy moths and can kill nearly 100% in treated areas. Btk is a common product that is readily available and inexpensive. It is environmentally safe and approved for use in organic farming.

Numerous studies have documented the safety of Btk for humans, pets, and other species. Attempts are made to avoid applying Btk to sites where threatened or endangered species of moths and butterflies exist.