

# Health Questions and Answers for Thuricide®

## For use against **Spongy Moth**

Prepared by the Office of Environmental Health Hazard Assessment,  
California Environmental Protection Agency



**Q: What is Thuricide®?**

**A:** Thuricide® is an organic insecticidal product containing *Bacillus thuringiensis kurstaki* (Btk), a naturally-occurring spore-forming bacterium found in soil and plants. Thuricide® is used by the California Department of Food and Agriculture (CDFA) as a biological insecticide to control invasive insects, such as moths. CDFA applies Thuricide® using a hydraulic or hand sprayer to the leaves of trees and shrubs.

**Q: How do the Btk toxins work?**

**A:** When a caterpillar ingests leaves treated with Thuricide®, the Btk toxins become activated in the caterpillar's non-acidic stomach. The active toxins destroy the caterpillar's digestive tract, resulting in the insect's starvation and death. Humans, common household pets, other mammals, fish, birds, adult moths, and most other insects (including honeybees) are not affected if they ingest Btk toxins because they have acidic stomachs that prevent the toxins from becoming active.

**Q: What are the health effects of Btk and toxins?**

**A:** Laboratory animals and humans who ingested high levels of Btk and its toxins did not show adverse health effects. High levels of Btk formulations, when inhaled or applied to the skin, caused mild skin or respiratory irritation. However, irritation is not expected with CDFA treatments using Thuricide® because the level of Btk applied is low.

**Q: How do regulatory agencies classify Btk's health effects and risk?**

**A:** The US Environmental Protection Agency has evaluated Btk and determined that it is safe to use on all types of food crops and can be applied up to the day of harvest. Btk is considered an organic insecticide.

**Q: What is known about the inert ingredients in Thuricide®?**

**A:** The inert ingredients in Thuricide® have been approved by the US Environmental Protection Agency for use on crops. Some of the inert ingredients may cause skin or eye irritation at high concentrations. When used according to label instructions, Thuricide® is diluted with water, ensuring a very low level of exposure to any one inert ingredient.

## **Health Questions and Answers for the Btk Insecticidal Product Thuricide®**

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**Q: *What precautions should people take when Thuricide® is applied to plants in their area?***

**A:** Follow all instructions and signage provided by CDFA and avoid areas being actively treated.

**Q: *What precautions should people take after Thuricide® is applied to plants in their area?***

**A:** Avoid outdoor activities in treated areas immediately after treatment. Wait until the material has dried before entering the treated area, about 4 hours depending on weather conditions. If it is necessary to enter before the spray material has dried, wear gloves and clothes to protect the skin from direct contact with the material. Wash skin and clothing if contact occurs. Follow all instructions or signage provided by CDFA.

**Q: *Can I eat fruits and vegetables from plants treated with Thuricide®?***

**A:** Vegetables and fruits from treated plants can be picked after spraying. However, for those wishing to take extra precaution, OEHHA recommends waiting for at least 24 hours after treatment before picking. Btk is destroyed by sunlight and microbial activity within a few days. Be sure to wash the fruits and vegetables thoroughly.

**Q: *Are there other products on the market that contain Btk?***

**A:** There are several home gardening products containing Btk that can be purchased at local home and garden or general retail stores..

**Q: *What should I do if I feel sick after the application of Thuricide®?***

**A:** Call the California Poison Control System hotline at (800) 222-1222 or consult with your physician.

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For further information, please contact:

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