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Use of Deltamethrin for Mosquito Control

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About the Health Canada Pest Management Regulatory Agency

The Health Canada Pest Management Regulatory Agency (PMRA) is responsible for pesticide regulation in Canada. The PMRA applies current, evidence-based scientific approaches to assess whether pesticides work to control target pests without posing unacceptable health and environmental risks.

What is deltamethrin?

Deltamethrin is a pesticide that has been registered for use in Canada since 1983 to control insects on a variety of sites including crops and roadsides. In 2017, Health Canada authorized the additional use of deltamethrin to control adult mosquitoes in residential and recreational areas.

How is deltamethrin used?

For mosquito control, deltamethrin is applied by fogging using ultra-low volume sprayers. The droplets released using this method are very small and remain suspended in the air until they evaporate. Deltamethrin provides 94–100% control of adult mosquitoes, and is recommended by the World Health Organization.

What is the effect of deltamethrin on the environment?

The small droplets of deltamethrin released by ultra-low volume sprayers will not fall readily onto land or into water, and are expected to break down in air. As a result, deltamethrin is not expected to cause harm to animals or plants on land or in water. Fogging treatments such as this are typically carried out at night or in early morning when adult mosquitoes are most active, and other non-target organisms are normally less active.

Are there health concerns related to the use of deltamethrin for mosquito control?

Health Canada evaluated scientific studies on DeltaGard 20EW, which is the end-use product containing deltamethrin and other ingredients/formulants, to see if exposure over short and long periods, by mouth, through skin, and through breathing, posed any health concerns. It was found to potentially cause mild irritation to eyes, and although it did not irritate skin, it could potentially cause an allergic skin reaction. Based on these findings, the hazard statement “Potential Skin Sensitizer” appears on the label. No other health concerns were found for the level of exposure expected when DeltaGard 20EW is used according to the label directions.



How do I minimize my exposure to deltamethin?

While no special precautions are necessary or required for bystanders, individuals who have concerns could take reasonable precautions to avoid further exposure during a spray program in the same way they would avoid other airborne materials during days when air quality advisories are issued. For example, they can reduce exposure by staying indoors, closing all windows and doors and shutting off outdoor vents (for example, air exchangers and heat recovery ventilators) during the spray period if spraying is taking place in their area, although this may not be required by local health officials.