

# The Use of DeltaGard 20EW in Mosquito Control Programs

## Public Health - Factsheet

If the Manitoba government issues a health order to control adult mosquitoes, the insecticide DeltaGard 20EW will be used. Health Canada recently approved the sale and use of DeltaGard 20EW to control adult mosquitoes in residential and recreational areas. The agency concluded that DeltaGard 20EW does not present an unacceptable risk to human or environmental health, when used according to the label directions.

### What is DeltaGard 20EW?

DeltaGard 20EW is an insecticide that was approved May 2017 in Canada for wide area mosquito control.

Deltamethrin is the active ingredient in DeltaGard 20EW and has been approved for use in Canada since 1984. Products containing deltamethrin are currently approved in Canada for controlling numerous insects in a variety of settings, such as:

- on greenhouse ornamental and food crops
- on industrial oilseed crops
- on feed and food crops grown on land
- on roadsides, shelterbelts and turf settings

Deltamethrin belongs to the pyrethroid family of pesticides. Pyrethroids are the most widely used class of pesticide for controlling adult mosquitoes by professionals in the world. Products containing deltamethrin have been used in insect control programs for over 15 years and have the full recommendation of the World Health Organization.

### Why is Manitoba now using DeltaGard 20EW for adult mosquito control?

Manitoba decided to use DeltaGard 20EW, a newly registered product, for a number of reasons. DeltaGard 20EW is classified by the United States Environmental Protection Agency as a reduced-risk pesticide. Products with this designation have lower application rates and pose less risk to humans and the environment.

Studies across North America, including those with *Culex tarsalis* mosquitoes, have shown that DeltaGard 20EW achieves significant control of adult mosquitoes (94 to 100 per cent).

### How is DeltaGard 20EW applied?

DeltaGard 20EW is applied using vehicle-mounted ultra-low volume (ULV) ground sprayers. Application rates range from 25 to 75 millilitres of product per hectare, or 0.5 to 1.5 grams of active ingredient (e.g. deltamethrin) per hectare. Typically, the application rate is 1.0 gram of active ingredient per hectare. In comparison, the application rate for Malathion is approximately 223 millilitres of product per hectare.

DeltaGard 20EW is applied during the overnight and early morning hours when mosquitoes are most active and weather conditions are appropriate. The timing of this application lessens the likelihood that beneficial insects, such as bees, will be impacted, because they are not active during the overnight and early morning hours.

### How does DeltaGard 20EW work?

DeltaGard 20EW kills adult mosquitoes by direct contact. The active ingredient, deltamethrin, interferes with the normal functioning of the mosquito's nervous system, leading to paralysis and death.

### Are there any health concerns related to using DeltaGard 20EW?

When used according to the label directions, DeltaGard 20EW is unlikely to affect human health. Health Canada has reviewed relevant data and literature, and has concluded that DeltaGard 20EW:

- has no toxic effect on genes
- has no effect on human development or reproduction
- is not likely to be a carcinogen to humans
- has low skin absorption

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## Does spraying DeltaGard 20EW have an effect on the environment?

The exposure of bees, birds, mammals, fish and plants is expected to be minimal, given the reduced application rate, timing of application, and the minimal deposits in soil, water and plants that are anticipated from ULV application.

DeltaGard 20EW is applied as fine droplets that don't readily drift or deposit and typically evaporate while suspended in the air. As a result, the deposit of these fine droplets into water or on land, and the impact on those ecosystems, is expected to be minimal.

## How can I minimize my exposure to DeltaGard 20EW?

While Health Canada has not identified specific precautions for bystanders, you can take the following actions to minimize your exposure during a fogging program:

- Whenever possible, stay indoors during and immediately after spraying.
- Close all windows and doors. Turn off air conditioning units and close vents to circulate indoor air, before the spraying begins.
- Bring laundry, toys and pets indoors before the spraying occurs.
- Cover swimming pool surfaces when possible.
- Wash homegrown fruit and vegetables with water before cooking or eating them.
- Rinse play equipment with water after the spraying is finished.

## How do I know if I'm experiencing health effects because of DeltaGard 20EW exposure?

Based on the most current data, you should not experience any symptoms when DeltaGard 20EW is applied as part of an adult mosquito control program. However, in the unlikely event that you have been overexposed to DeltaGard 20EW, the most likely symptoms would involve brief skin sensitization such as tingling, burning, itching and numbness to the skin at the site of exposure.

If you experience these effects, consult your health care provider. These effects are reversible and are not likely to result in any long-term consequences. If you are particularly sensitive to chemical exposure, discuss this with your health care provider.

## What is the role of Health Canada?

Health Canada is responsible for assessing the human health and environmental safety of all pest control products before they are approved for use in Canada. Manufacturers must provide the agency with a full analysis of the product formulation, as well as extensive health and environmental data, so that Health Canada scientists can do a risk assessment. Only products that are scientifically reviewed, found to be effective and have no human or environmental health concerns are approved by Health Canada.

You can access information on pesticide regulation on Health Canada's website, or by contacting the Pest Management Information Service:

**Telephone: 1-800-267-6315**

**From outside Canada: 613-736-3799**

**Fax: 613-736-3798**

**Email: [pminfoserv@hc-sc.gc.ca](mailto:pminfoserv@hc-sc.gc.ca)**

**Website: [www.hc-sc.gc.ca/pmra-arla](http://www.hc-sc.gc.ca/pmra-arla)**

Additional information on DeltaGard 20EW:

- Pest Management Regulatory Agency's registration decision at [http://www.hc-sc.gc.ca/cps-spc/pubs/pest/\\_decisions/rd2017-08/index-eng.php](http://www.hc-sc.gc.ca/cps-spc/pubs/pest/_decisions/rd2017-08/index-eng.php),
- City of Winnipeg <http://www.winnipeg.ca/publicworks/insectcontrol/mosquitoes/deltagard.stm#5>
- United States Environmental Protection Agency's registration decision [https://www3.epa.gov/pesticides/chem\\_search/ppls/000432-01534-20150325.pdf](https://www3.epa.gov/pesticides/chem_search/ppls/000432-01534-20150325.pdf)