



Malathion

More Information:

- [EPA Draft Malathion Human Health Assessment Available \(EPA News Story\)](#)
- [Letter to Mosquito Control Districts on malathion aerial spraying](#)
- [Notice of Availability for Draft Malathion Human Health Risk Assessment](#): Comments must be received using the "[Comment Now](#)" button in the docket on or before December 21, 2016.
- [Registration review docket for malathion: EPA-HQ-OPP-2009-0317](#)
- [Biological evaluations for malathion](#)

Malathion is an organophosphate (OP) insecticide that has been registered for use in the United States since 1956. It is used:

- in the agricultural production of a wide variety of food and feed crops to control many types of insects such as aphids, leafhoppers, and Japanese beetles;
- in the USDA's Cotton Boll Weevil Eradication Program and Fruit Fly (Medfly) Control Program;
- by home gardeners for outdoor residential uses including vegetable gardens, fruit trees, and a variety of ornamentals; and
- in public health pest control programs for controlling mosquito-borne illnesses.

[Read the malathion draft human health risk assessment. This document and supporting documents are available in the docket under "Supporting Documents."](#) Comments are due by December 21, 2016.

Learn more about malathion and its use in mosquito control:

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1. **How is malathion used in mosquito control?**

Malathion is part of an integrated overall strategy to control mosquitoes. In particular, malathion is an adulticide, used to kill adult mosquitoes. Most malathion mosquito adulticide applications (about 90%) are made by ground application (fogging equipment mounted on trucks). However, in situations of heavy mosquito presence across large geographic areas, aerial application is an important method of application. Less than 1% of spraying for mosquitoes is malathion aerial spray.

2. Do malathion products used for mosquito control pose health risks to humans?

The draft human health risk assessment raises some concerns about the use of malathion applied by air. The use of malathion by ground application (fogging equipment mounted on trucks) does not raise concerns.

3. How has EPA addressed the risks from aerial spraying?

Given the current importance of aerial mosquito spraying as a tool to minimize transmission of the Zika virus and other mosquito-borne diseases, EPA has provided mosquito control professionals in local governments and mosquito control districts with advice on malathion aerial spraying to reduce risks.

While EPA would normally not make risk management recommendations based on a draft risk assessment, we have provided this information to mosquito control professionals in the interim so they can be confident in the safety of malathion aerial spraying. By making slight modifications to current labeled application directions, including adjusting the height of the application and the droplet size of the spray, exposure can be reduced while maintaining efficacy and effectiveness.

4. Are mosquito control applicators required to follow EPA's use recommendations for application of aerial mosquitoicide products?

No. Applicators are required to follow the pesticide label at a minimum. However, these recommendations for additional precautions are intended to reduce people's exposure to malathion. At this time, applicators are not legally required to follow the recommendations for modifying aerial application of malathion mosquito adulticide products.

EPA will continue to work with industry and applicators to ensure safe use of malathion for mosquito control while continuing the registration review process for malathion. We will seek public comment throughout its evaluation of this use, as well as all other uses of malathion, and propose any necessary risk mitigation and associated label changes. We anticipate making a decision in 2017.

5. Are there any special precautions to be taken during malathion spraying?

EPA is confident that aerial application is safe if mosquito control applicators follow our recommended application modifications. To reduce exposures even further, parents and caretakers may choose to keep young children inside on the day that spraying is taking place.

Some people who are especially concerned may choose to take some of these steps to help reduce exposure even more. This may include people who are sensitive to chemicals and those with pre-existing respiratory problems.

- Stay indoors with the windows closed.

- If you are outdoors during spraying operations and you can see the spray, avoid contact with it. If you can't avoid contact, rinse your skin and eyes with water.
- Wash fruits and vegetables from your garden before storing, cooking or eating.
- Cover outside items like furniture and grills while the spraying is occurring. Bring pets and items like pet food dishes and children's toys indoors
- If you think you have had a reaction to the mosquito spray, talk to your doctor or call the regional Poison Control Center at 1-800-222-1222.

6. What other measures should be taken to control mosquitoes besides aerial spraying?

Aerial spraying is the one method of pest control that can rapidly reduce the number of mosquitoes that can be carrying diseases (including Zika virus, West Nile Virus, and dengue) over a large area in a relatively short period of time; however, aerial spraying is not the only method EPA and CDC are recommending to control mosquito populations.

[Find more ways to control mosquitoes and prevent mosquito bites.](#)

[Read about using integrated pest management to control mosquito populations.](#)

7. What are the next steps?

The malathion draft human health risk assessment is available in the federal docket for public comment at www.regulations.gov in docket [EPA-HQ-OPP-2009-0317](#), under Supporting Documents. After consideration of public comments, we will propose any necessary risk mitigation decisions and associated label changes. We expect to reach a decision in 2017.

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