



Re-evaluation Note

REV2003-03

Re-evaluation of Malathion: Assessment of Use in Mosquito Abatement Programs

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The purpose of this document is to notify registrants, pesticide regulatory officials and the Canadian public of the regulatory status of the organophosphate pesticide malathion in Canada.

Malathion is one of the organophosphate pesticides being re-evaluated by the Pest Management Regulatory Agency (PMRA), as announced on June 29, 1999, in the Agency's Re-evaluation Document REV99-01, *Re-evaluation of Organophosphate Pesticides*. The PMRA has developed a re-evaluation program that uses a modern scientific approach to examining older active ingredients and their end-use products to determine their continuing acceptability in relation to human health and the environment.

In light of interest by provinces and municipalities for possible large-scale application of pesticides for control of adult mosquitoes in residential areas during the upcoming season, the PMRA has completed an occupational and bystander risk assessment for this use of malathion. The remaining uses of this active ingredient will be addressed in further documents.

The PMRA has determined that large-scale applications of malathion in residential areas for control of adult mosquitoes do not pose an unacceptable risk to bystanders and operators (mixer/loaders and applicators) when used in the following manner:

- ground applications are made with Ultra-Low Volume (ULV) equipment at the currently registered rate of up to 60.8 g active ingredient (a.i.)/ha
- aerial applications are made with ULV equipment at a rate up to 260 g a.i./ha
- operators wear long pants, long-sleeved shirts and chemical-resistant gloves during mixing/loading, application, clean-up and repair.

Based on consultation with the provinces/territories, these scenarios reflect the typical use pattern for malathion when/if used in provincial/territorial/municipal mosquito abatement programs.

For other current label uses of malathion for control of adult mosquito in residential areas (e.g., higher rate of application, spray, thermal fog), the calculated margins of exposure for bystanders are unacceptable. As a result, these uses are no longer permitted.

The following changes to the malathion use pattern will be implemented for the 2003 spray season. Registrants of affected products have been requested to amend their labels as follows:

A. Products with uses other than ULV application

Fyfanon 50% Emulsifiable Concentrate Insecticide, Reg. No. 4590

Malathion 50E Emulsifiable Liquid Insecticide, Reg. No. 9975

Malathion 500E Insecticide, Reg. No. 4709

Wilson Malathion 50 EC Liquid Insecticide, Reg. No. 16099

1. Removal of all malathion non-ULV use for mosquito control in residential areas (e.g., spray, thermal fog at higher rates) from the label
2. Addition of the following statements to the label:
 - “Do not apply as a fog, aerosol, mist or space spray in residential areas”
 - “Residential areas are defined as sites where bystanders including children may be potentially exposed during or after spraying. This includes around homes, schools, parks, playgrounds, playing fields, public buildings or any other areas where the general public including children could be exposed”.

B. Products registered for ULV application

Fyfanon ULV Ultra Low Volume Concentrate Insecticide, Reg. No. 9337

Gardex Malathion ULV Concentrate, Reg. No. 16198

Malathion 95 ULV Insecticide, Reg. No. 25638

Wilson Malathion ULV Insecticide concentrate, Reg. No. 14597

Addition of the following statements to the section of the label pertaining to aerial application for mosquito control:

1. “In residential areas, rates must not exceed 260 g a.i./ha”
2. “Residential areas are defined as sites where bystanders including children may be potentially exposed during or after spraying. This includes around homes, schools, parks, playgrounds, playing fields, public buildings or any other areas where the general public including children could be exposed”
3. “Consult Provincial/Territorial pesticide regulatory officials for required authorization”

Label amendments are not required for products registered for ground ULV application.

In order to adequately address the above concerns, product which is currently in the hands of the registrant, distributor and user will be overstickered in a place which is obvious to users to indicate the statements listed above. Applicators of products for mosquito control are advised not to use products which do not carry the revised use directions. Further label changes will probably be required pending the completion of the re-evaluation of all the uses of malathion.

The PMRA will continue with the re-evaluation of the remaining uses for malathion. The outcome of this assessment will be the subject of a future PMRA document.

Malathion is also registered for mosquito control in the United States. The United States Environmental Protection Agency (USEPA) is in Phase 6 of their re-registration process on malathion. Announcement of the risk management decisions for malathion, by the USEPA, is expected at the end of Phase 6.