



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

August 23, 2023

Maryanne Kellogg  
Regulatory Consultant  
Loveland Products, Inc.  
c/o Pyxis Regulatory Consulting Inc.  
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Subject: Registration Review Label Amendments Incorporating Mitigation from the Fish and Wildlife Services (FWS) and the National Marine Fisheries Services (NMFS) Biological Opinions on the Effects of Malathion on Endangered and Threatened Species and Designated Critical Habitat  
*Product Name:* Malathion 8 Aquamul  
*EPA Registration Number:* 34704-474  
*Application Dates:* August 25, 2022, and March 8, 2023  
*Decision Numbers:* 587114 and 597115

Dear Maryanne Kellogg:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the FWS and NMFS' Biological Opinions on the effects of Malathion on federally listed Endangered and Threatened species and designated critical habitat in accordance with section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 et seq.). The Agency has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling

before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions, please contact Carolyn Smith by phone at (202) 566-2273 or via email at [smith.carolyn@epa.gov](mailto:smith.carolyn@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kelly Sherman", with a stylized flourish at the end.

Kelly Sherman  
Chief, Risk Management Implementation Branch 3  
Pesticide Re-evaluation Division  
Office of Pesticide Programs

Enclosure

Sublabel A- [Directions FOR Use and Precautions for terrestrial applications to agricultural, outdoor, urban and non-agricultural use sites.]



# MALATHION 8 AQUAMUL

**ACCEPTED**  
08/23/2023  
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 34704-474

**FOR INSECT CONTROL ON LISTED ORNAMENTALS, FRUIT AND NUT TREES, AND VEGETABLE PLANTS  
ORGANOPHOSPHATE INSECTICIDE**

ACTIVE INGREDIENT:	%BYWT.
Malathion* .....	81.8%
OTHER INGREDIENTS* .....	18.2%
<b>TOTAL</b>	<b>100.0%</b>

\*O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate.  
Contains 8.0 pounds of malathion per gallon.

### KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

[For Additional Precautionary Statements, [Complete] First Aid, Directions for Use, Storage and Disposal and Other Use Information, See [Inside] [This] [Label Booklet] [booklet label] [container label] [booklet and container label].]  
[For additional Precautionary Statements, Directions for Use, and Other Use Information, See Inside [This] [Attached] Label Booklet.]

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have a person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>

**NOTE TO PHYSICIAN:** This product may cause cholinesterase inhibition. Atropine is antidotal. 2-PAM may be effective as an adjunct to atropine.

**FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.**

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

For help with any spill, leak, fire, exposure involving this product, call day or night, CHEMTREC 1-800-424-9300.

EPA REG. NO. 34704-474  
EPA EST. NO.  
NET CONTENTS 2.5 GAL (9.46L)

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Harmful if swallowed, inhaled, or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist or vapor. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**For all formulations and all use patterns – mixers, loaders, applicators, flaggers, and other handlers must wear:**

- Long sleeved shirt and long pants,
- Shoes plus socks,
- Chemical resistant gloves made of barrier laminate or butyl rubber, nitrile rubber, or viton  $\geq$  14 mils.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

See engineering controls for additional requirements.

**ENGINEERING CONTROLS**

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)]. Pilots must wear the PPE required on this labeling for applicators.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic invertebrates.

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff after application. Use care when applying in or to an area which is adjacent to any body of water, and do not apply when weather conditions favor drift from target area. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Spray drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash water or rinsate. To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

In citrus, stone fruit, pome fruit and tree nuts: Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. **Protect pollinating insects by following label directions intended to minimize drift and to reduce risk to these organisms.**

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Reporting Ecological Incidents: To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-866-944-8565.

**For commercial, industrial, and institutional use products packaged in containers equal or greater than 5.0 gallons or 50.0 pounds:**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame. This product is incompatible with other chemicals (e.g. oxidizing agents).

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Reporting Ecological Incidents: To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-866-944-8565.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**Do not enter or allow worker entry into treated areas during the restricted entry interval (REI). The REI for each crop is listed in the directions for use associated with each crop.**

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls,
- Shoes plus socks,
- Chemical-resistant gloves made of any waterproof material.

**NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or nurseries.

**Do not enter or allow others to enter until sprays have dried.**

**PRECAUTIONS AND RESTRICTIONS**

For use in empty grain storage (grain elevators/silos): Use only with adequate ventilation. After using this product, ventilate thoroughly before occupying enclosed spaces. Do not allow contact with treated surface until sprays have dried.

**Agricultural Application Uses**

Malathion 8 Aquamul Insecticide is for use only by federal, state, tribal or local government officials responsible for insect control or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory Agency to perform grasshopper/Mormon Cricket, Beet Leafhopper

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or Boll Weevil control applications, or by persons under their supervision, or as allowed by state regulations for persons treating private property.

Do not apply this Malathion 8 Aquamul Insecticide when soil is saturated, or when a storm event likely to produce runoff from the treated area is forecasted (by NOAA/National Weather Service, or other similar forecasting service) to occur within 48 hours following application.

*[Note to Reviewer: may or may not be presented in tabular format.]*

<b>Required Buffer Zones for Bodies of Water</b>		
<b>Bodies of Water</b>	<b>Type of Application</b>	<b>Buffer Zone (in Feet)</b>
Bodies of water, such as, but not limited to, lakes, reservoirs, rivers, streams, wetlands, (natural) ponds, estuaries, and commercial fish ponds	<b>Non-ULV Ground Application</b>	Do not apply within 25 feet of aquatic habitats*
	<b>Non-ULV Aerial Application</b>	Do not apply within 50 feet of aquatic habitats**
	<i>[Note to Reviewer: ULV Buffer Zones to Water Bodies and the associated notes will only be placed on the label when agricultural ULV applications are listed on the label or on a Special Local Needs label.]</i>	
	<b>ULV Aerial Application†</b>	Do not apply within 100 feet of aquatic habitats‡
<p>* You must follow the instructions for additional buffer distances beyond the 25 feet, as applicable, per the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <a href="http://www.epa.gov/espp/">http://www.epa.gov/espp/</a>, call 1-844-447-3813, or email <a href="mailto:ESPP@epa.gov">ESPP@epa.gov</a>.</p> <p>** Do not apply within 50 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, wetlands, ponds, estuaries, and commercial fishponds). You must follow the instructions for additional buffer distances beyond the 50 feet, as applicable, per the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult <a href="http://www.epa.gov/espp/">http://www.epa.gov/espp/</a>, call 1-844-447-3813, or email <a href="mailto:ESPP@epa.gov">ESPP@epa.gov</a>.</p> <p>‡ This 100-foot buffer is in addition to the full swath displacement upwind that applicators must use at the downwind edge of the field. Applications made by mosquito control districts and other public health officials are exempt from this buffer requirement.</p>		

*[Note to Reviewer: may or may not be presented in tabular format.]*

<b>Restricted Application Sites</b>	<b>Programs Allowed to Apply to These Sites</b>
Agricultural, uncultivated areas and fence rows/hedge rows Non-agricultural right of way/hedgerows	Federal or State Sponsored Programs, Boll Weevil Eradication Programs, Curly Top Virus Programs, Other Federally or State designated programs.

**MANDATORY SPRAY DRIFT MANAGEMENT**

**AIRBLAST APPLICATIONS**

- Sprays must be directed into the canopy.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- User must turn off outward pointing nozzles at row ends and when spraying outer row.
- Do not apply during temperature inversions.

**GROUND BOOM APPLICATIONS**

- Do not release spray at a height greater than 4 feet above the ground or crop canopy.
- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572).
- Do not apply when wind speeds exceed 10 mph at the application site.
- Do not apply during temperature inversions.

**AERIAL APPLICATIONS - NON-ULV (Non-Ultra Low Volume)**

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.

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- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard (ASABE S641).
- If the windspeed is 10 miles per hour or less, applicators must use  $\frac{3}{4}$  swath displacement upwind at the downwind edge of the field. When the windspeed is between 11-15 miles per hour, applicators must use a full swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

*Note to Reviewer: the following Spray Drift management language will only be placed on the label when agricultural ULV applications are listed on the label or on a Special Local Needs label.*

**MANDATORY SPRAY DRIFT MANAGEMENT**

**AERIAL APPLICATIONS – ULV (Ultra Low Volume (ULV) APPLICATIONS)**

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators must select nozzle and pressure that deliver fine or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard (ASABE S641).
- Applicators must use a full swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

**SPRAY DRIFT REQUIREMENTS**

Observe the following requirements when spraying in the vicinity of aquatic areas such as, but not limited to, lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish ponds.

**Droplet Size** – Use the largest droplet size consistent with acceptable efficacy. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.

**Wind Direction and Speed** – For all non-aerial applications, wind speed must be measured adjacent to the application site on the upwind side, immediately prior to application.

**Temperature Inversion** – Do not make aerial or ground applications into areas of temperature inversions. Inversions are characterized by stable air and increasing temperatures with increasing distance above the ground. Mist or fog may indicate the presence of an inversion in humid areas. Where permissible by local regulations, the applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

**Additional Requirements for Ground Applications** – Spray should be released at the lowest height consistent with pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided. For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy. For airblast applications, turn off outward pointing nozzles at row ends and when spraying the outer two rows. To minimize spray loss over the top in orchard applications, spray must be directed into the canopy.

**Additional Requirements for Aerial Applications** – For aerial applications, the spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices.

Aerial applicators must consider flight speed and nozzle orientation in determining droplet size.

When applications are made with a cross-wind, the swath will be displaced downwind. The applicator must compensate for this displacement at the downwind edge of the application area by adjusting the path of the aircraft upwind.

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**APPLICATION THROUGH IRRIGATION SYSTEMS – CHEMIGATION**

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; flood (basin); furrow; border; or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise. Mix in clean supply tank the specified amount of this product for acreage to be covered, and needed quantity of water. This product should not be tank-mixed with other pesticides, surfactants or fertilizers unless prior use has shown the combination noninjurious under your conditions of use.

Follow precautionary statements and directions for all tank-mixed products.

On all crops, use sufficient gallonage of water to obtain thorough and uniform coverage, but not cause runoff or excessive leaching. This will vary depending on equipment, pest problem and stage of crop growth. Application of more or less than optimal quantity of water may result in decreased chemical performance, crop injury or illegal pesticide residues.

Meter this product into the irrigation water uniformly during the period of operation. Do not overlap application. Follow specified label rates, application timing, and other directions and precautions for crop being treated.

Continuous mild agitation of pesticide mixture may be needed to assure a uniform application, particularly if the supply tank requires a number of hours to empty.

**Chemigation Systems Connected To Public Water Systems**

Note: Loveland Products Inc. does not encourage connecting chemigation systems to public water supplies. The following information is provided for users who have diligently considered all other application and water supply options before electing to make such a connection.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow outlet end of the flow fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

**Sprinkler Chemigation (Foliar Spray Uses)**

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.



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The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

### **Flood (Basin), Furrow And Border Chemigation (Soil Drench Uses)**

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

- a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- c. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### **Drip (Trickle) Chemigation (Soil Drench Uses)**

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### **Resistance-Management Recommendations**

For resistance management, Malathion 8 Aquamul contains a Group 1B insecticide/acaricide. Any insect or mite population may contain individuals naturally resistant to Malathion 8 Aquamul and other Group 1B insecticides/acaricides. The resistant individuals may dominate the insect/mite population if this group of insecticides/acaricides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of Malathion 8 Aquamul or other Group 1B insecticides/acaricides within a growing season, and among growing seasons, with different groups that control the same pests.
- Avoid consecutive sprays of Malathion 8 Aquamul or other insecticides in the 1B group during a season.
- Do not apply more than the maximum number of sprays allowed.
- Use tank mixtures with insecticides/acaricides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues target pest(s) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
  - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact Loveland Products, Inc at 1-866-944-8565 or at LovelandProducts.com and use the “contact us” link.

#### **Endangered Species Protection Requirements:**

It is a Federal offense to use any pesticide in a manner that results in an unauthorized “take” (e.g., kill or otherwise harm) of an endangered species and certain threatened species under the Endangered Species Act Section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product.

To obtain Bulletins, consult <http://www.epa.gov/espp/> call 1-844-447-3813, or email [ESPP@epa.gov](mailto:ESPP@epa.gov). You must use the Bulletin valid for the month in which you will apply the product.

#### **Pollinator Best Management Practices and Additional Information**

Following best management practices can help reduce risk to terrestrial pollinators. Examples of best management practices include applying pesticides in the evening and at night when pollinators are not foraging and checking to confirm hive locations before spraying. For additional resources on pollinator best management practices, visit <https://www.epa.gov/pollinator-protection/find-best-management-practices-protect-pollinators>.

Managed pollinator protection plans are developed by states/tribes to promote communication between growers, landowners, farmers, beekeepers, pesticide users, and other pest management professionals to

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reduce exposure of bees to pesticides. If available, visit state plans for additional information on how to protect pollinators.

How to Report Bee Kills. It is recommended that users contact both the state lead agency and the U.S. Environmental Protection Agency to report bee kills due to pesticide application. Bee kills can be reported to EPA at [beekill@epa.gov](mailto:beekill@epa.gov). To contact your state lead agency, see the current listing of state pesticide regulatory agencies at the National Pesticide Information Center's website: [http://npic.orst.edu/reg/state\\_agencies.html](http://npic.orst.edu/reg/state_agencies.html).

**APPLICATIONS**

Use rates and use directions as noted below. Use higher rate when foliage is heavy or infestation is severe. Apply when pests first appear. Apply the following specified rates in sufficient water to thoroughly cover 1 acre. By ground, apply using a minimum of 10.0 gallons of water per acre and by air apply using a minimum of 2.0 gallons of water per acre (standard is 100 gallons of water for thorough coverage sprays). Do not apply orchard rates in less than 10.0 gallons of water per acre.

Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Alfalfa  See individual crop listings for Birdsfoot Trefoil, Clover, Lespedeza, And Vetch,	Non-ULV-Aerial, Ground boom	Aphids Armyworms Clover Leaf Weevils Grasshoppers Leafhoppers (including Potato Leafhoppers) Spider Mites	1.25	Do not apply to alfalfa in bloom. The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.25 lb AI/A (1.25 pt Malathion 8 Aquamul); the maximum number of applications is 2/cutting; and the minimum retreatment interval is 14 days. The maximum number of applications per year is 2, for a maximum yearly total of 2.5 lbs. ai/A/year (2.5 pints/A/year).	0
Apricots	Non-ULV-Aerial, Airblast	Aphids Codling moth Orange tortrix Soft brown scale Terrapin scale	1.5	Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.5 lb AI/A (2.4 pt Malathion 8 Aquamul); the maximum number of applications/yr is 2; and the minimum retreatment interval is 7 days	6
Asparagus	Non-ULV-Aerial, Ground boom	Asparagus beetle Thrips	1.25	The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.25 lb AI/A (1.25 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days.	6
Avocado	Non-ULV-Aerial, Airblast	Green house thrips Latania scale Omnivorous looper Orange tortrix Soft brown scale	4.0 to 4.7	The Restricted Entry Interval (REI) is 48 hrs. The maximum application rate is 4.7 lbs AI/A (4.7 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 30 days. Do not apply more than a total of 9.4 lbs of malathion per acre per calendar year.	7

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Barley	Non-ULV-Aerial, Ground boom	Aphids Cereal leaf beetle Grasshoppers Greenbugs	1.25	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	7
Beets, Garden (including tops) <b>(Do not apply to Sugar beets)</b>	Non-ULV-Aerial, Ground boom	Aphids	1.0 to 1.25	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.75 lbs of malathion per acre per calendar year.	7
Caneberries (Blackberries Boysenberries Dewberries Gooseberries Loganberries Raspberries)	Non-ULV-Aerial, Ground boom	Rose scale Aphids	2.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 2.0 lbs AI/A (2.0 pts Malathion 8 Aquamul); the maximum number of applications/year is 3; and the minimum retreatment interval is 7 days. Do not apply more than a total of 6.0 lbs of malathion per acre per calendar year.	1
		Japanese beetle Leafhoppers Mites Thrips	1.0 to 2.0		
Blueberries (High bush and low bush)	Non-ULV-Aerial, Ground boom	Cherry fruitworm Cranberry fruitworm Japanese beetle Plum curculio Sharpnose leafhopper	1.25	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 3; and the minimum retreatment interval is 5 days. Do not apply more than a total of 3.75 lbs of malathion per acre per calendar year.	1
Broccoli Broccoli Raab (Rapini) Brussels Sprouts Cauliflower Chinese Broccoli Cavalo Broccolo Mizuna Mustard Spinach Rape Greens	Non-ULV-Aerial, Ground boom	Aphids Cabbage looper Carrot weevil Imported cabbageworm	1.25	The Restricted Entry Interval (REI) is 48 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	2
Cabbage; Cabbage, Chinese (Bok Choy, Napa); Cabbage, Chinese Mustard	Non-ULV-Aerial, Ground boom	Aphids Cabbage looper Flea beetle Imported cabbageworm	1.25	The Restricted Entry Interval (REI) is 48 hrs. The maximum single application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 3 and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.75 lbs of malathion per acre per calendar year.	7
Caneberries See above					
Carrots (roots)	Non-ULV-Aerial, Ground boom	Aphids Leafhoppers	1.0 to 1.25	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications /year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	1

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)		
Celery	Non-ULV- Aerial, Ground boom	Aphids Spider mites	1.0 to 1.5	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.5 lbs AI/A (1.5 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.0 lbs of malathion per acre per calendar year.	7		
Cherries (sweet, tart)	Non-ULV- Aerial, Airblast	Black cherry aphid Bud moth Cherry fruit fly Forbes scale Fruit tree leafroller Lesser peach tree borer San Jose scale	1.75	Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. May injure foliage of varieties such as Brooks, Tulare, Coral and some others. The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.75 lbs AI/A (1.75 pts Malathion 8 Aquamul); the maximum number of applications/year is 4; and the minimum retreatment interval is 3 days. Do not apply more than a total of 7.0 lbs of malathion per acre per calendar year.	3		
Chestnuts	Non-ULV- Aerial, Airblast	Mites	2.0 to 2.5	Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. Do not treat after shuck split. The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 2.5 lbs AI/A (2.5 pts Malathion 8 Aquamul); the maximum number of applications/year is 2 and the minimum retreatment interval is 7 days. Do not apply more than a total of 5.0 lbs of malathion per acre per calendar year.	2		
Citrus (Grapefruit, Lemons, Limes, Oranges, Tangerines, Tangelos)	Non-ULV Option 1 and 2: Aerial or Ground Airblast Option 3: Ground Airblast only	Aphids Black scale California red scale Citricola scale Florida red & Mediterranean fruit fly Purple scale Soft scale Thrips Yellow scale	Each year, choose only one option, allowable in your state Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. Applications should be made in 100 gallons of diluent.				
			<b>A - All States: Non-ULV. Aerial Application or Ground Airblast Application</b>				
			1.5 pints Malathion 8 Aquamul/Acre (1.5 lbs. ai/A) applied in 3 separate applications.	Maximum single application rate is 1.5 lb ai/A (1.5 pt Malathion 8 Aquamul). Maximum applications/yr is three (3), (for a total max annual application rate of 1.5 pt/A/yr (1.5 lbs max ai/A/year.)) REI is 12 hours, RTI (Minimum application interval) 30 days	7		
			<b>OR, B - All States, except FL: Non-ULV. Aerial Application or Ground Airblast Application</b>				
			4.5 pints Malathion 8 Aquamul/ Acre/ (4.5 lbs. of a.i./A). Must be applied in a single application.	Maximum single application rate is 4.5 lb ai/A (4.5 pt Malathion 8 Aquamul). Maximum applications/yr is one (1) (for a total max annual application rate of 4.5 pt/A/yr (4.5 lbs max ai/A/year.)) REI is 72 hours Maximum number of applications is one (1) per year. (RTI - 12 months.)	7		
<b>OR, C - CA Only: Non-ULV, Ground Airblast application only</b>							

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
			7.5 pints Malathion 8 Aquamul/ Acre/ (7.5 lbs. of a.i./A). Must be applied in a single application.	Maximum single application rate is 7.5 lb ai/A (7.5 pt Malathion 8 Aquamul). Maximum applications/yr is one (1) (for a total max annual application rate of 7.5 pt/A/yr (7.5 lbs max ai/A/year.)) REI is 72 hours Maximum number of applications is one (1) per year. (RTI – 12 months.)	7
Clover	Non-ULV-Aerial, Ground boom	Aphids Armyworms Clover Leaf Weevils Grasshoppers Leafhoppers (including Potato Leafhoppers) Spider Mites	1.25	Do not apply to clover in bloom. The Restricted Entry Interval (REI) is 12 hours. The maximum application rate is 1.25 pounds active ingredient per acre (1.25 pts Malathion 8 Aquamul); the maximum number of applications per cutting is 2 The minimum retreatment interval is 14 days. The maximum number of applications per year is 4, for a maximum yearly total of 5 lbs. ai/A/year (5.0 pints/A/year).	0
Collards	Non-ULV-Aerial, Ground boom	Aphids Cabbage looper Flea beetles Imported cabbageworm	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 3; and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.0 lbs of malathion per acre per calendar year.	7
Corn (field)	Non-ULV-Aerial, Ground boom	Aphids Cereal leaf beetle Corn earworm Corn rootworm-adults Grasshoppers Sap beetle Thrips	1.0	For corn earworm, apply to silks as soon as they appear. The Restricted Entry Interval (REI) is 72 hrs for detasseling, and 12 hrs for all other activities. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/ year is 2; and the minimum retreatment interval is 7 days.	7
Corn (sweet and pop)	Non-ULV-Aerial, Ground boom	Japanese beetles	1.0	The Restricted Entry Interval (REI) is 72 hrs for detasseling, and 12 hrs for all other activities. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/ year is 3; and the minimum retreatment interval is 5 days.	5
Cotton (Non-Boll Weevil Eradication Program (BWEP) Use)	Non-ULV-Aerial, Ground boom	Aphids Boll weevil Cotton leaf perforator Cotton leafworm Fall armyworm Fleahopper Garden webworm Grasshopper Leafhoppers Lygus bug Mites Thrips White Flies	1.5 to 2.5	The Restricted Entry Interval (REI) is 48 hrs The maximum application rate is 2.5 lbs AI/A (2.5 pts Malathion 8 Aquamul); the maximum number of applications/ year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 5.0 lbs of malathion per acre per calendar year.	7

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Cucumber	Non-ULV-Aerial, Ground boom	Aphids Pickleworm Spider mites Thrips	1.0 to 1.75	Do not apply unless plants are dry. The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.75 lbs AI/A (1.75 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.5 lbs of malathion per acre per calendar year.	1
		Cucumber beetle	1.75		
Currants	Non-ULV-Aerial, Ground boom	Currant aphid Imported currant worm	1.25	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	1
		Japanese beetle Mites	1.0 to 1.25		
Dandelions	Non-ULV-Aerial, Ground boom	Aphids	1.0 to 1.25	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	7
Eggplant, And Oriental Eggplant	Non-ULV-Aerial, Ground boom	Aphids Spider mites	0.75 to 1.56	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.56 lbs AI/A (1.56 pts Malathion 8 Aquamul); the maximum number of applications/year is 4; and the minimum retreatment interval is 5 days. Do not apply more than a total of 6.24 lbs of malathion per acre per calendar year.	3
		Lace bugs	1.56		
Endive	Non-ULV-Aerial, Ground boom	Aphids Mites	1.0 to 1.25	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	7
Figs	Non-ULV-Aerial, Airblast	Dried Fruit beetle Vinegar flies	2.0 pts plus 2.0 gals unsulfurized molasses as a bait spray	At the maximum application rate of 2.0 lbs AI/A (2.0 pts Malathion 8 Aquamul), the Restricted Entry Interval (REI) is 24 hrs. The maximum number of applications/year is 2, and the minimum application interval is 5 days; <b>OR</b> at the maximum application rate of 1.5 lbs AI/A (1.5 pts Malathion 8 Aquamul), the Restricted Entry Interval (REI) is 12 hrs. The maximum number of applications/year is 2, and the minimum application interval is 5 days. Do not apply more than a total of 4.0 lbs of malathion per acre per calendar year.	5

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Flax	Non-ULV-Aerial, Ground boom	Grasshoppers	0.5	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 0.5 lb AI/A (0.5 pt Malathion 8 Aquamul); the maximum number of applications/year is 3; and the minimum retreatment interval is 7 days. Do not apply more than a total of 1.5 lbs of malathion per acre per calendar year.	52
Garlic	Non-ULV-Aerial, Ground boom	Aphids Thrips	1.0 to 1.5	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.56 lbs AI/A (1.5 pts Malathion 8 Aquamul); the maximum number of applications/year is 2 and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.0 lbs of malathion per acre per calendar year.	3
Grain Sorghum, see Sorghum					
Grain Storage Facilities (Grain elevators/ silos)	Non-ULV, Hand-held sprayer	Confused flour beetle, Rice weevil, Granary weevil, Saw-toothed grain beetle, Flat grain beetle, Red flour beetle, Rusty grain beetle, Lesser grain borer and as an aid in control of Indian meal moth.	Mix: 1.0 gallon of Malathion 8 Aquamul per 25.0 gallons of diluent Apply: 3 gal/1000 sq feet (0.6 lbs. ai/1000 sq ft.)	Malathion 8 Aquamul must be applied using a hand-held sprayer from a non-ULV application system. This product may be used for residual wall, floor and machinery spray in grain elevators/silos before loading grain. Make a thorough application when applying the finished emulsion. The maximum application rate is 0.6 lbs. ai/1000 sq ft. (1.0 pint of Malathion 8 Aquamul Insecticide/ 1000 sq ft.) When mixed at the rate of 1 gal of this product to 25 gallons water, that is 3 gal finished solution /1000 sq feet. Before applying spray, clean grain elevators/silos thoroughly. Remove and burn all sweepings and debris. <b>Do not apply directly to grain. Only for use in facilities (grain elevators/silos) being prepared to store barley, corn, oats, rye, or wheat.</b> Maximum of one application allowed per storage period. Restricted Entry Interval– 12 hrs (Note: 3 gal finished spray/1000 sq feet (0.6 lbs. ai/1000 sq ft.))	NA
Grapes (raisin, table, wine)	Non-ULV-Aerial, Airblast	Drosophila Japanese beetle Leafhopper Mealybugs Spider mite Terrapin scale	1.88	May cause injury to foliage on some varieties. The Restricted Entry Interval (REI) is 72 hrs for girdling and tying, and 24 hrs for all other activities. The maximum application rate is 1.88 lbs AI/A (1.88 pts Malathion 8 Aquamul); the maximum number of applications/ year is 2; and the minimum retreatment interval is 14 days. Do not apply more than a total of 3.76 lbs of malathion per acre per calendar year.	3



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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Grape vines (overwintering on nursery stock only)	Dip	Mealybugs	3 pints/ 200 gallons of water	Remove excess soil from roots and submerge entire root system in Malathion solution for 5 minutes. Maximum of one application per year. Additional PPE required. Mixers, loaders, handlers must wear a chemical resistant apron.	NA
Grass; Forage, Hay (Bermuda, barnyard grass; Canary grass; Fescue; Orchard grass; Red top timothy; Yellow foxtail	Non-ULV- Aerial, Ground boom	Aphids Armyworms Grasshoppers Leafhoppers	1.25	The Restricted Entry Interval (REI) is 12 hrs. The maximum single application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications per cutting is 1. The maximum number of applications/ year is 4. The minimum retreatment interval is 14-days. Do not apply more than a total of 5.0 lbs of malathion per acre per calendar year.	0
Guava	Non-ULV- Aerial, Airblast	Fruit flies	0.75 pt + 1.0 lb partially hydrolyzed yeast protein or enzymatic yeast hydrolysate	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 13; and the minimum retreatment interval is 3 days. Do not apply more than a total of 16.25 lbs of malathion per acre per calendar year.	2
Hops	Non-ULV- Aerial, Airblast	Aphids Mites	0.63	The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 0.63 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 1.26 lbs. malathion per acre per calendar year.	10
Horseradish	Non-ULV- Aerial, Airblast	Aphids	1.0 to 1.25	The Restricted Entry Interval (REI) is 24 hours. The maximum single application rate is 1.25 lb AI/A (2.0 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	7
Kale	Non-ULV- Aerial, Airblast	Aphids Cabbage looper Flea beetle Imported cabbage worm	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 3; and the minimum retreatment interval is 5 days. Do not apply more than a total of 3.0 lbs of malathion per acre per calendar year.	7
Kohlrabi	Non-ULV- Aerial, Airblast	Aphids Cabbage looper Flea beetle Imported cabbage worm	1.25	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	3

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Kumquats	Non-ULV-Aerial, Ground boom	Aphids Black scale California red scale Citricola scale Florida red scale Florida purple scale Soft scale Thrips Yellow Scale	4.5	Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. The Restricted Entry Interval (REI) is 48 hrs. The maximum application rate is 4.5 lbs AI/A (4.5 pts Malathion 8 Aquamul); the maximum number of applications/year is 1; and the minimum retreatment interval is 30 days. Do not apply more than a total of 4.5 lbs of malathion per acre per calendar year.	7
		Mediterranean Fruit Fly	1.0 to 4.5		
Leeks	Non-ULV-Airblast. Ground Boom	Aphids Thrips	1.0 to 1.56	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.56 lbs AI/A (1.56 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.12 lbs of malathion per acre per calendar year.	3
Lespedeza	Non-ULV-Airblast. Ground Boom	Grasshoppers	1.25	Do not apply to Lespedeza in bloom. The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.25 lb; the maximum number of applications is 1/cutting; with an annual maximum of 2 application per year; for a maximum yearly total of 2.5 lbs/ ai/ A/ year (2.5 pints/A/ year) and the minimum retreatment interval is 14 days.	0
Lettuce (head lettuce, Leaf lettuce)	Non-ULV-Airblast. Ground Boom	Aphids Leafhoppers	1.25 to 1.88	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.88 lbs AI/A (1.88 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 6 days for head and 5 days for leaf. Do not apply more than a total of 3.76 lbs of malathion per acre per calendar year.	14
		Cabbage looper Mites	1.88		
Macadamia Nut	Non-ULV-Aerial, Airblast	Green stink bug	0.94	Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 0.94 lb AI/A (0.94 pt Malathion 8 Aquamul); the maximum number of applications/year is 6; and the minimum retreatment interval is 7 days. Do not apply more than a total of 5.64 lbs of malathion per acre per calendar year.	1
Mango	Non-ULV-Aerial, Airblast	Fruit flies	0.75 pt + 1.0 lb partially hydrolyzed yeast protein or enzymatic yeast hydrolysate	Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 0.9375 lb AI/A (0.9375 pt Malathion 8 Aquamul); the maximum number of applications/year is 10; and the minimum retreatment interval is 7 days. Do not apply more than a total of 9.375 lbs of malathion per acre per calendar year.	1

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Melons (other than watermelon)	Non-ULV-Aerial, Airblast	Aphids Cucumber beetle Pickleworm Spider mites Thrips	1.0	Do not apply unless plants are dry. The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	1
Mustards (Mustard greens, Mustard spinach, Chinese mustard, Mizuna)	Non-ULV-Aerial, Airblast	Aphids Cabbage looper Carrot weevil Imported cabbageworm	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 3; and the minimum retreatment interval is 5 days. Do not apply more than a total of 3.0 lbs of malathion per acre per calendar year.	7
Nectarines	Non-ULV-Aerial, Airblast	Aphids (Green peach, Black cherry, Black peach, Rusty plum) Japanese beetle Mites (European red, Two-spotted)	2.5 to 3.0	Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. The Restricted Entry Interval (REI) is 24 hours. The maximum single application rate is 3.0 lb ai/A (4.8 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 6.0 lbs of malathion per acre per calendar year.	7
		Cottony peach scale Lesser peach tree borer Oriental fruit moth	3.0		
Oats	Non-ULV-Aerial, Ground boom	Aphids Cereal leaf beetle Grasshoppers Greenbugs	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	7
Okra	Non-ULV-Aerial, Ground boom	Aphids Japanese beetle	1.2	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.2 lbs AI/A (1.2 pts Malathion 8 Aquamul); the maximum number of applications/year is 4; and the minimum retreatment interval is 7 days. Do not apply more than a total of 4.8 lbs of malathion per acre per calendar year.	1
Onions, (bulb and green)	Non-ULV-Aerial, Ground boom	Onion thrips	1.0 to 1.56	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.56 lbs AI/A (1.56 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.12 lbs of malathion per acre per calendar year.	3
		Onion maggots	1.56		
Papaya	Non-ULV-Aerial, Airblast	Aphids Mealybugs	1.25	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 8; and the minimum retreatment interval is 3 days. Do not apply more than a total of 10.0 lbs of malathion per acre per calendar year.	1

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Parsley	Non-ULV-Aerial, Airblast	Aphids	1.0 to 1.5	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.5 lbs AI/A (1.5 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.0 lbs of malathion per acre per calendar year.	7
Parsnips	Non-ULV-Aerial, Airblast	Aphids	1.0 to 1.25	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	7
Passion Fruits	Non-ULV-Aerial, Ground boom	Fruit flies	0.75 pt + 1.0 lb partially hydrolyzed yeast protein or enzymatic yeast hydrolysate	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 8; and the minimum retreatment interval is 7 days. Do not apply more than a total of 8.0 lbs of malathion per acre per calendar year.	3
Peaches	Non-ULV-Aerial, Airblast	Aphids (Green peach, Black cherry, Black peach, Rusty plum) Japanese beetle Mites (European red, Two-spotted)	2.5 to 3.0	For Oriental fruit moth control, apply at petal fall and then 11 to 14 days later. The Maximum number of applications per year is 2. The Restricted Entry Interval (REI) is 24 hours. The maximum single application rate is 3.0 lbs. ai/A (4.8 pts) and the minimum retreatment interval is 11 days.  Do not apply more than a total of 6.0 lbs of malathion per acre per calendar year. Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete.	7
		Cottony peach scale Lesser peach tree borer Oriental fruit moth Plum curculio Terrapin scale	3.0		
Peas (Dried and green)	Non-ULV-Aerial, Ground boom	Aphids Pea Weevil	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	3
Pecans	Non-ULV-Aerial, Airblast	Aphids Mites Pecan bud moth Pecan leaf casebearer Pecan nut casebearer Pecan phylloxera	2.5	Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 2.5 lbs AI/A (2.5 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 5.0 lbs of malathion per acre per calendar year.	7
Peppers	Non-ULV-Aerial,	Aphids	0.75 to 1.5	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.56 lbs AI/A (1.56 pts Malathion 8 Aquamul);	3

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
	Ground boom	Pepper maggots	1.5	the maximum number of applications/year is 2; and the minimum retreatment interval is 5 days. Do not apply more than a total of 3.0 lbs of malathion per acre per calendar year.	
Peppermint, Spearmint <i>[Note to Reviewer: the chart lists max single app rate at 0.84 lbs ai/A. Is this correct? The "label changes" section does not note a rate change. Note continues in "Directions "]</i>	Non-ULV- Aerial, Airblast	Aphids Adult flea beetles Leafhoppers Spider mites	0.84	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 0.94 lb AI/A (0.94 pt Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 1.98 lbs of malathion per acre per calendar year. <i>[continued note to reviewer: As there was no note to change the rate, I have left the rate at the original 0.94 lbs. ai/A. If the rate does need to be changed, please let us know. We will make the max single application rate 0.84 lbs. ai/A (1.35 pints/A)]</i>	7
Pineapples	Non-ULV- Aerial, Ground boom	Mealybugs	2.0	The Restricted Entry Interval (REI) is 24 hrs. The maximum application rate is 2.0 lbs AI/A (2.0 pts Malathion 8 Aquamul); the maximum number of applications/year is 3; and the minimum retreatment interval is 7 days. Do not apply more than a total of 6.0 lbs of malathion per acre per calendar year.	0
Potatoes	Non-ULV- Aerial, Ground boom	Aphids False chinch bugs Leafhoppers Mealybugs	1.0 to 1.5	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.56 lbs AI/A (1.56 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.0 lbs of malathion per acre per calendar year.	0
Pumpkins	Non-ULV- Aerial, Ground boom	Aphids Cucumber beetle Pickleworms Spider mites Thrips	1.0	Do not apply unless plants are dry. The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	1
Radishes	Non-ULV- Aerial, Ground boom	Aphids	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	7

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Rice	Non-ULV-Aerial, Ground boom	Rice leafminer Rice stink bug	1.0 to 1.5	Apply when the eggs and larvae are abundant on the seedling rice. Apply during the early milk and dough stage of growing rice. The rice herbicide, Propanil, should not be applied within 15 days of a Malathion treatment. A 24-hour holding time is required before floodwaters may be released after treatment to rice. Broadcast use only over intermittently flooded areas. Application may not be made around bodies of water where fish or shellfish are grown and/or harvested commercially. The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.25 lb AI/A (2.0 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	7
Rutabagas	Non-ULV-Aerial, Ground boom	Aphids	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	7
Rye	Non-ULV-Aerial, Ground boom	English grain aphid Cereal Leaf beetles Young grasshoppers Armyworms	1.0	The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.0 lb AI/A (1.6 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0-lbs of malathion per acre per calendar year.	7
Salsify (including tops)	Non-ULV-Aerial, Ground boom	Aphids	1.0 to 1.25	The Restricted Entry Interval (REI) is 24 hours. The maximum single application rate is 1.25 lb AI/A (2.0 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.5-lbs of malathion per acre per calendar year.	7
Shallots	Non-ULV-Aerial, Ground boom	Aphids Thrips	1.0 to 1.5 to 2.0	The Restricted Entry Interval (REI) is 24 hours. The maximum single application rate is 1.56 lb AI/A (2.5 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days.	3
Sorghum, Grain	Non-ULV-Aerial, Ground boom	Greenbugs	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	7

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Spinach	Non-ULV-Aerial, Ground boom	Aphids	1.6	The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.0 lb AI/A (1.6 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	7
Squash	Non-ULV-Aerial, Ground boom	Aphids Cucumber beetles Pickleworms Spider mites Thrips	Summer: 1.75; Winter: 1.0	Do not apply unless plants are dry. <b>For Summer Squash</b> , the Restricted Entry Interval (REI) is 24 hours. The maximum single application rate is 1.75 lb AI/A (2.8 pt Malathion 8 Aquamul); the maximum number of applications/yr is 3; and the minimum retreatment interval is 7 days. <b>For Winter Squash</b> , the Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.0 lb AI/A (1.6 pt Malathion 8 Aquamul); the maximum number of applications/yr is 3; and the minimum retreatment interval is 7 days.	1
Strawberries	Non-ULV-Aerial, Ground boom	Aphids Field crickets Lygus bugs Potato leafhoppers Spider mites Spittle bugs Strawberry leafroller Strawberry root weevil Whitefly	1.0 to 2.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 2.0 lbs AI/A (2.0 pts Malathion 8 Aquamul); the maximum number of applications/year is 4; and the minimum retreatment interval is 7 days. Do not apply more than a total of 8.0 lbs of malathion per acre per calendar year.	3
Sweet Potatoes	Non-ULV-Aerial, Ground boom	Leafhoppers Leafminers Morningglory	Leafhoppers - 1.0 to 1.56 Leafminers and Morningglory – 1.56	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.56 lbs AI/A (1.56 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 3.12 lbs of malathion per acre per calendar year.	0
Swiss Chard	Non-ULV-Aerial, Ground boom	Aphids	1.0	The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.0 lb AI/A (1.6 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	14
Tomatoes, tomatillo	Non-ULV-Aerial, Ground boom	Aphids Spider mites	1.0 to 1.56	The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.56 lb AI/A (2.5 pt Malathion 8 Aquamul); the maximum number of applications /yr is 4; and the minimum retreatment interval is 5 days. Do not apply more than a total of 6.24 lbs of malathion per acre per calendar year.	1
		Armyworms Drosophila Fruit worms Tomato russet mites	1.56		

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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Trefoil (Birdsfoot)	Non-ULV-Aerial, Ground boom	Aphids Armyworms Clover Leaf Weevils Grasshoppers Leafhoppers (including Potato Leafhoppers) Spider Mites	1.25	The Restricted Entry Interval (REI) is 12 hours. The maximum application rate is 1.25 pounds active ingredient per acre (1.25 pts Malathion 8 Aquamul); the maximum number of applications per cutting is 1 The minimum retreatment interval is 14 days. The maximum number of applications per year is 2, for a maximum yearly total of 2.5 lbs. ai/A/year (2.5 pints/A/year).	0
Turnips	Non-ULV-Aerial, Ground boom	Aphids Cabbage looper Flea beetle Imported cabbageworm	1.25	The Restricted Entry Interval (REI) is 12 hours. The maximum single application rate is 1.25 lb ai/A (2.0 pt Malathion 8 Aquamul); the maximum number of applications /yr is 2; and the minimum retreatment interval is 5 days for greens and 7 days for roots. Do not apply more than a total of 2.5 lbs of malathion per acre per calendar year.	1
Vetch	Non-ULV-Aerial, Ground boom	Aphids Armyworms Clover Leaf Weevils Grasshoppers Leafhoppers (including Potato Leafhoppers) Spider Mites	1.25	The Restricted Entry Interval (REI) is 12 hours. The maximum application rate is 1.25 pounds active ingredient per acre (1.25 pts Malathion 8 Aquamul); the maximum number of applications per cutting is 1 The minimum retreatment interval is 14 days. The maximum number of applications per year is 2, for a maximum yearly total of 2.5 lbs. ai/A/year (2.5 pints/A/year).	0
Walnuts	Non-ULV-Aerial, Airblast	Aphids Mites Walnut husk fly	2.5	Do not apply this product within 3 days prior to bloom, during bloom, or until petal fall is complete. The Restricted Entry Interval (REI) is 24 hours. The maximum single application rate is 2.5 lb AI/A (4.0 pt Malathion 8 Aquamul); the maximum number of applications /yr is 3; and the minimum retreatment interval is 7 days. Do not apply more than a total of 7.5 lbs of malathion per acre per calendar year	7
Watercress	Non-ULV-Aerial, Ground boom	Aphids	1.0 to 1.25	Do not apply when water is on the field. Do not irrigate until 24 hours after application. At the maximum application rate of 1.25 lbs AI/A (1.25 pts Malathion 8 Aquamul), the Restricted Entry Interval (REI) is 24 hrs. The maximum number of applications/year is 5, and the minimum application interval is 3 days; <b>OR</b> at the maximum application rate of 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul), the Restricted Entry Interval (REI) is 12 hrs. The maximum number of applications/year is 5, and the minimum application interval is 3 days. Do not apply more than a total of 6.25 lbs of malathion per acre per calendar year.	3
Watermelon	Non-ULV-Aerial, Ground boom	Aphids Cucumber beetle Leafhopper Pickleworms Spider mites	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lbs AI/A (1.5 pts Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 6.0 lbs of malathion per acre per calendar year.	1



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Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Wheat (spring and summer)	Non-ULV-Aerial, Ground boom	Aphids Cereal leaf beetles Grasshoppers Greenbugs	1.0	The Restricted Entry Interval (REI) is 12 hrs. The maximum application rate is 1.0 lb AI/A (1.0 pt Malathion 8 Aquamul); the maximum number of applications/year is 2; and the minimum retreatment interval is 7 days. Do not apply more than a total of 2.0 lbs of malathion per acre per calendar year.	7

**NON-AGRICULTURAL USES OF MALATHION 8 AQUAMUL Insecticide Restrictions**

Do not apply this product when a storm event likely to produce runoff from the treated area is forecasted (by NOAA/National Weather Service, or other similar forecasting service) to occur within 24 hours following application.

**Pollinator Best Management Practices and Additional Information for Non-Agricultural Uses**

Following best management practices can help reduce risk to terrestrial pollinators. Examples of best management practices include applying pesticides in the evening and at night when pollinators are not foraging and checking to confirm hive locations before spraying. For additional resources on pollinator best management practices, visit <https://www.epa.gov/pollinator-protection/find-best-management-practices-protect-pollinators>.

**BUFFER ZONE FOR APPLICATION NEAR WATER**

Do not apply within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, wetlands, or natural ponds, estuaries, and commercial fish ponds).

**ADDITIONAL WATER PROTECTIONS STATEMENTS for non-agricultural uses**

- Do not apply directly to or allow the product to enter sewers or storm drains, or to any area like a drain or gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur.
- Do not apply directly to impervious horizontal surfaces such as sidewalks, driveways, and patios except as a spot or crack-and-crevice treatment.
- Do not apply to vertical surfaces directly above pervious or impervious surfaces that drain into ditches, storm drains, gutters, or surface waters.
- Do not apply or irrigate to the point of runoff.

**Commercial Nursery Use Restrictions:**

- Apply by ground application only.
- Do not apply more than two applications per year.
- Minimum retreatment interval is 7 days.
- Do not apply when the wind speed is greater than 10 mph.
- Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (ASABE S572).
- Do not apply by ground equipment within 25 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, wetlands or natural ponds, estuaries and commercial fish farm ponds)

**Residential Use on Outdoor Ornamentals Restrictions:**

- Only for out-of-doors plants
- Application equipment limited to hand-pump sprayers, hose-end sprayers, and sprinkler cans.
- Do not apply more than two applications per year.
- Minimum retreatment interval is 10 days.

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OUTDOOR ORNAMENTALS

Precaution: Before treating a large number of ornamental plants with Malathion 8 Aquamul alone or as a tank mixture with any other material, make a test application on a few plants and observe 7 to 10 days prior to treating large areas to reduce the possibility of plant injury.

Crop	Rate	Pests	Comments
Ornamental Herbaceous Plants Ornamental and/or Shade Trees Ornamental Woody Shrubs	1.0 pt in 100 gals of water as a dilute spray	Aphids Euonymus scales European pine shoot moth Four-lined leaf bug Japanese beetle adults Lace scale Mealybugs Millipedes Oyster shell scale Potato leafhopper Rose leafhopper Scurfy scale Spider mites Springtails Sowbugs Tarnished plant bug Thrips Whiteflies	<p><b>IMPORTANT:</b> Avoid use on certain ferns including Boston, Maidenhair and Pteris, as well as some species of Crassula and Canaetri Juniper. For Oyster shell, Fletch, Juniper, Oak kermes and Pine needle scales, apply when scale crawlers have settled on foliage.</p> <p>The Restricted Entry Interval (REI) is 12 hrs. Maximum of 2 applications/year/growing cycle; 10 day minimum retreatment interval; maximum single application rate 2.5 lbs AI/100 gals.</p> <p>Spot treatment only.</p>
	1.25 pts in 100 gals of water as a dilute spray	Azalea scale Bagworm Birch Leafminer Boxwood leafminer Fletch scale Florida-red scale Juniper scale Magnolia scale Oak kermes Pine leaf scale Tent caterpillar	
	1.6pts in 100gals of water	Black scale crawler Monterey pine scale	
	2.5pts in 100gals of water	Pine needle scale Wax scale	

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Pine Seed Orchards and Christmas Tree Plantation	<p><b>Restrictions on Christmas Tree Plantations and Nursery</b></p> <ul style="list-style-type: none"> <li>• Aerial application is prohibited.</li> <li>• Do not apply more than two applications per year.</li> <li>• Minimum retreatment interval is 7 days.</li> </ul> <p><b>Restrictions for Pine Seed Orchard Use</b></p> <ul style="list-style-type: none"> <li>• For use in slash pine seed orchards in Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina and Texas only.</li> <li>• Malathion may be used to control thrips from mid-December to mid-March.</li> <li>• Do not apply more than two applications per year.</li> <li>• Minimum retreatment interval is 7 days.</li> <li>• Do not apply by ground within 25 feet or by air within 50 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, wetlands or natural ponds, estuaries, and commercial fish farm ponds).</li> <li>• For airblast applications, user must turn off outward pointing nozzles at row ends and when spraying outer row.</li> <li>• For aerial applications, do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety. Applicators must use ½ swath displacement upwind at the downwind edge of the field.</li> <li>• Do not apply when the wind speed is greater than 10 mph.</li> <li>• Applicators are required to select the nozzle and pressure that deliver medium or coarser droplets (per ASABE S572 for ground and ASABE S641 for aerial).</li> <li>• Do not apply during temperature inversions.</li> </ul>		
Plantations Pine Seed Orchards and Christmas Tree Plantations (Continued)	Plantations mix 3.2 pts of Malathion 8 Aquamul in 100 gals of water	European pine sawfly Slash pine flower thrips	Apply 6.0 pts of the mixture/tree on the smallest flowering trees. Mist blowers or airblast sprays may be used. The Restricted Entry Interval (REI) is 12 hrs. Maximum of 2 applications/year/growing cycle; 10 day minimum retreatment interval; maximum single application rate 3.2 lbs AI/100 gals.
	For air application, mix 3.2 pts of Malathion 8 Aquamul in at least 10.0 gals of water		Apply a minimum of 5.0 gals of mixture/acre. Make 2 applications, the first when female flowers are in twig bud stage, the second one week prior to maximum flower receptivity to pollen.

SMALL GRAIN STORAGE FACILITIES (Grain Elevators/Silos)

Only for use in storage facilities being prepared to store corn, wheat, rye, oats, and barley grain. For a residual wall, floor, and machinery spray in grain elevators/silos prior to loading grain, apply 5.0 pints per 25.0 gallons of water making thorough application. Before applying spray, clean grain elevators/silos thoroughly. Remove and burn all sweeping as debris. Do not apply directly to grain. REI = 12 hours. The maximum single application rate is 0.6 pound active ingredient per 1000 square feet. The maximum number of applications is 1 per storage period.

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**FLY CONTROL**

**Additional Restrictions on Residential Use for Fly Control:**

- For outdoor use only.

Amount of Spray	Amount Malathion 8 Aquamul	Directions for Use
1.0 gal	1.2 fl oz	For use around the lower foundation of homes and as a spot treatment only on yards. Apply spray at rate of 1.0 gal/1000 sq ft on painted surfaces and 2.0 gals/1000sqft on unpainted surfaces where flies alight or congregate. Apply along the outside of lower foundation, apply in a course spray in a two-foot wide or less band from the base of a man-made structure and up to two feet on wall surfaces. Do not make more than 4 applications per year. Minimum retreatment interval is 7-days.
10.0 gals	12.0 fl oz	
100 gals	7.5 pts	

For Bait Sprays - add the following sugar or unsulfurized molasses/corn syrup.

Amount of Spray	Amount of Sugar	Amount of Unsulfurized Molasses/ Corn Syrup
1.0 gal	0.5 cup	4.0 fl oz
10.0 gals	2.0 lbs	26.0 fl oz
100 gals	20.0 lbs	2.0 gals

**Grain Elevators**

For use in empty grain storage (grain elevators/silos): Use only with adequate ventilation. After using this product, ventilate thoroughly before occupying enclosed spaces. Do not allow contact with treated surface until sprays have dried

Crop	Application Type	Pest(s)	Application Rate Pts/A	Directions	Pre-Harvest Interval (PHI) (Days)
Grain Storage Facilities (Grain elevators/silos)	Non-ULV, Hand-held sprayer	Confused flour beetle, Rice weevil, Granary weevil, Saw-toothed grain beetle, Flat grain beetle, Red flour beetle, Rusty grain beetle, Lesser grain borer and as an aid in control of Indian meal moth.	Mix: 1.0 gallon of Malathion 8 Aquamul per 245.0 gallons of diluent Apply: 3 gal/1000 sq feet (0.6 lbs. ai/1000 sq ft.)	Malathion 8 Aquamul must be applied using a hand-held sprayer from a non-ULV application system. This product may be used for residual wall, floor and machinery spray in grain elevators/silos before loading grain. Make a thorough application when applying the finished emulsion. The maximum application rate is 0.6 lbs. ai/1000 sq ft. (1.0 pint of Malathion 8 Aquamul Insecticide/ 1000 sq ft.) When mixed at the rate of 1 gal of this product to 25 gallons water, that is 3 gal finished solution /1000 sq feet. Before applying spray, clean grain elevators/silos thoroughly. Remove and burn all sweepings and debris. <b>Do not apply directly to grain. Only for use in facilities (grain elevators/silos) being prepared to store barley, corn, oats, rye, or wheat.</b> Maximum of one application allowed per storage period. Restricted Entry Interval– 12 hrs (Note: 3 gal finished spray/1000 sq feet (0.6 lbs. ai/1000 sq ft.))	NA

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**STORAGE AND DISPOSAL**

**PROHIBITIONS:** Do not contaminate water, food, or feed by storage or disposal. Do not store under conditions which might adversely affect the container or its ability to function properly.

**PESTICIDE STORAGE:** Malathion 8 Aquamul should be stored in the original unopened container in a secure dry place. Do not contaminate with other pesticides or fertilizers. The product should never be heated above 55 °C (131 °F), and should not be stored for long periods of time at a temperature in excess of 25 °C (77 °F).

**PESTICIDE DISPOSAL:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**CONTAINER DISPOSAL: Nonrefillable container.** Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at [www.acrecycle.org](http://www.acrecycle.org). If not recycled, then puncture and dispose of in a sanitary landfill.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

**For containers up to 5 gallons: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For containers greater than 5 gallons or 50 lbs: Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.**

**Malathion 8 AQUAMUL  
34704-474**

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

**FORMULATED FOR  
LOVELAND PRODUCTS, INC.  
P.O. BOX 1286, GREELEY, COLORADO  
80632-1286**

See separate directions and precautions for mosquito control applications.

[EPA Approval Date]

**Malathion 8 AQUAMUL  
34704-474**

Malathion    GROUP    1B    INSECTICIDE

**Sublabel B-** [Directions and Precautions for Mosquito Control Applications, including wide-area mosquito control using ULV applications.]



**MALATHION 8 AQUAMUL**

Organophosphate Insecticide  
[AGRICULTURAL INSECTICIDE]  
EMULSIFIABLE LIQUID

ACTIVE INGREDIENT:	% BY WT.
Malathion (O,O-Dimethyl phosphorodithioate of diethyl mercaptosuccinate).....	81.8%
<b>OTHER INGREDIENTS:</b> .....	<u>18.2%</u>
<b>TOTAL</b> .....	100.0%

Contains 8 lbs. Malathion per gallon

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"><li>• Immediately call a poison control center or doctor.</li><li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li><li>• Do not give any liquid to the person.</li><li>• Do not give anything by mouth to an unconscious person.</li></ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-866-944-8565.</b> Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Note to Physician: This material is a cholinesterase inhibitor. Treat symptomatically. Atropine is an antidote.	

For help with any spill, leak, fire, exposure involving this product, call day or night, CHEMTREC 1-800-424-9300.

KEEP OUT OF REACH OF CHILDREN

**CAUTION**

[See Below For Additional Precautionary Statements.]

[For Additional Precautionary Statements, [Complete] [First Aid], Directions for Use, Storage and Disposal and Other Use Information, See [Inside] [This] [Label Booklet] [booklet label] [container label] [booklet and container label].]

[For additional Precautionary Statements, Directions for Use, and Other Use Information, See Inside [This] [Attached] Label Booklet.]

EPA Reg. No.: 34704-452

EPA Est. No.:

MANUFACTURED FOR:  
LOVELAND PRODUCTS, INC.  
P.O. BOX 1286  
GREELEY, COLORADO 80632-1286

NET CONTENTS: \_\_\_ GALLONS

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**Malathion 8 AQUAMUL**  
**34704-474**

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**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION**

Harmful if swallowed or absorbed through skin. Causes eye irritation. Avoid contact with eyes, skin, or clothing.  
Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are barrier laminate, butyl rubber, nitrile rubber, and Viton.

**For all formulations and all use patterns - mixers, loaders, applicators, flaggers, and other handlers must wear:**

- Long sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

See engineering controls for additional requirements.

**ENGINEERING CONTROLS**

Pilots must use an enclosed cockpit in a manner that is consistent with the WPS for Agricultural Pesticides [40 CFR 170.240(d)(6)].  
Pilots must wear the PPE required on this labeling for applicators.

**USER SAFETY RECOMMENDATIONS**

**Users should:**

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS FOR WIDE AREA MOSQUITO ADULTICIDE USE**

This pesticide is toxic to fish and aquatic invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

When applying as a wide area mosquito adulticide, before making the first application in a season, it is advisable to consult with the state or tribal agency charged with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply or allow it to drift onto blooming crops or weeds while bees are actively visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local public health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort. When applying as a wide area mosquito adulticide, do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Reporting Ecological Incidents: To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-866-944-8565.



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**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For use by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

When applying as a wide area mosquito adulticide, before making the first application in a season, it is advisable to consult with the state or tribal agency charged with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

**Endangered Species Protection Requirements:**

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species under the Endangered Species Act Section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product.

To obtain Bulletins, consult <http://www.epa.gov/espp/> call 1-844-447-3813, or email ESPP@epa.gov.

You must use the Bulletin valid for the month in which you will apply the product.

**Pollinator Protection (Recommendations)**

To minimize hazard to bees, do not apply this product more than two hours after sunrise or more than two hours before sunset. This timing restriction prohibits applications when bees are most active (mid-day). This restriction does not apply when applications are made as a spot treatment or to prevent or control a threat to public and/or animal health determined by a state, tribal or local public health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

Calibrate and inspect nozzles at least once a year to ensure they are in good working condition.

Reporting Ecological Incidents: To report ecological incidents, including mortality, injury, or harm to plants and animals, call 1-866-944-8565.

**Resistance-Management Recommendations**

For resistance management, Malathion 8 Aquamul contains a Group 1B insecticide/acaricide. Any insect or mite population may contain individuals naturally resistant to Malathion 8 Aquamul and other Group 1B insecticides/acaricides. The resistant individuals may dominate the insect/mite population if this group of insecticides/acaricides are used repeatedly in the same areas. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of Malathion 8 Aquamul or other Group 1B insecticides/acaricides within a growing season, and among growing seasons, with different groups that control the same pests.
- Avoid consecutive sprays of Malathion 8 Aquamul or other insecticides in the 1B group during a season.
- Do not apply more than the maximum number of sprays allowed.
- Use tank mixtures with insecticides/acaricides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues target pest(s) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
  - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
  - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
  - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
  - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.

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- The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact Loveland Products, Inc at 1-866-944-8565 or at LovelandProducts.com and use the “contact us” link.

**Mandatory Spray Drift Management  
Ultra-Low Volume (ULV) Applications**

- Apply when ground wind speeds are equal to or greater than 1 mph.
- All types of applications should be conducted when temperatures at ground level are at or above 50°F.
  - For Ground Applications:
    - Create an optimum swath when possible. An optimum swath width can be achieved when Malathion 8-E is applied from a truck that is being driven perpendicular to the wind direction. Direct the spray head of equipment to ensure even distribution of the spray cloud throughout the area.
    - FOR BEST RESULTS treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the spray cloud in the air column close to the ground.
    - An inversion of air temperatures and a light breeze is preferable. Application during the cooler hours of the night or early morning is recommended.
  - For Aerial Applications:
    - Do not apply by fixed wing aircraft at a nozzle height less than 100 feet (30.5 m) above ground or canopy, or by helicopter at a height less than 75 feet (22.9 m) above the ground or canopy, unless specifically approved by the state or tribe based on public health needs.
  - For aerial applications as ULV sprays or fogs
    - Adult mosquito control applications should be limited to trained personnel.
- For use only by federal, state, tribal or local government officials responsible for public health or vector control or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory Agency to perform adult mosquito control applications, or by persons under their supervision, or as allowed by state regulations for persons treating private property.
- This pesticide is toxic to aquatic organisms. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to aquatic organisms.
- Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material beyond the body of water to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.
- Before making the first application in a season, consult with the state or tribal Agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.
- Treatment of a site must be based on surveillance results. Do not treat any site with malathion more than 1 time per day. Do not apply more than 0.23 lbs ai/acre of Malathion 8 Aquamul per day by air or 0.06 lbs ai/acre per day by ground within any 24-hour period. Do not treat any site with more than 0.46 lb ai/acre within a 7-day period and the amount of undiluted Malathion 8 Aquamul applied to any site must not exceed 5.75 lbs ai/acre per year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne diseases in animal or human populations, or if specifically approved by the state or tribe during a natural disaster effort.

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**MOSQUITO CONTROL**  
**PRECAUTIONS AND RESTRICTIONS**

- Do not apply more than 0.23 lb active ingredient/A/day.
- Only treat when mosquitoes are swarming or biting. Do not re-treat a site more than 3 times in any one week.
- However, more frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito borne diseases in animal or human populations, or if specifically approved by the state or tribe during a natural disaster effort.
- Apply when wind speed is greater than or equal to 1 mph.
- Do not apply by fixed wing aircraft at height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.
- Before using, read the directions contained in this labeling for the proper methods and procedures which must be followed to achieve effective insect control and avoid permanent damage to automobile and other paint finishes. **IMPORTANT: IN AREAS WHERE AUTOMOBILES, TRAILERS, TRUCKS AND PLEASURE BOATS ARE PRESENT**, undiluted spray droplets of Malathion 8 Aquamul will permanently damage vehicle paint finishes unless the aircraft used for the ultra-low volume application meets all the specifications listed below.

**AERIAL APPLICATION**

Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 um) and that 90% of the spray is contained in droplets smaller than 100 microns (Dv 0.9 < 100 um). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle, and the nozzle flow rate(s) are properly calibrated.

**ULV Aerial Application**

Do not apply within 100 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, wetlands, ponds, estuaries, and commercial fishponds). This 100-foot buffer is in addition to the full swath displacement upwind that applicators must use at the downwind edge of the field. Applications made by mosquito control districts and other health officials are exempt from this requirement.

**GROUND BASED APPLICATION**

Ground based ULV applications may be made only for wide-area adult mosquito control, by federal/state insect control programs ( Grasshopper/Morman Cricket, Beet Leafhopper, or Boll Weevil Control Programs) and to pasture/ rangeland.

Spray equipment must be adjusted so that the volume median diameter is less than 30 microns (Dv 0.3 < 30 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 um). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a laser based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

**ULV Ground Application**

Do not apply within 50 feet of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, streams, wetlands, ponds, estuaries, and commercial fishponds). This 50-foot buffer is in addition to the full swath displacement upwind that applicators must use at the downwind edge of the field. Applications made by mosquito control districts and other public health officials are exempt from this requirement.

**Thermal Aerosols or Fogs**

For control of adult mosquitoes with thermal aerosols or fogs. Apply Malathion 8 Aquamul at the rate of 0.23 pts Malathion 8 Aquamul in 100 gallons finished solution\* by ground equipment delivering 40 gallons per hour at a vehicle speed of 5 miles per hour to treat a swath width of 300 feet (equivalent to 180 acres per hour). At 0.23 pts Malathion 8 Aquamul per 100 gallons of finished solution this is equivalent to 0.23 lb ai/acre.

\*There is a great variation in the chemical composition of fuel oils which may be used as thermal fog solvents. These differences may cause sludge and/or affect the solubility of the Malathion 8 Aquamul.

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**Nonthermal Aerosols**

Control of adult mosquitoes over a 300-foot swath can be obtained with non-thermal aerosols of Malathion 8 Aquamul using the following rates at the indicated vehicle speeds.

<b>Dilution Rates for Malathion 8 Aquamul</b>					
<b>Undiluted</b>					
<b>Apply as follows:</b>					
Lbs.A.I./Acre	Application Rates Fluid Ounces per Minute at Vehicle Speeds				Fluid Ounces of finished spray per acre
	5 mph	10 mph	15 mph	20 mph	
0.03 - 0.06*	2.3-4.5	4.5-9.0	6.8-13.5	9.0-18.0	0.75-1.5
<b>For A 1:2</b>					
<b>Dilution Mix 1 part Malathion 8E with 2 parts Suitable Fuel Oil or Water</b>					
<b>Apply as follow:</b>					
Lbs. A.I./Acre	Application Rates Fluid Ounces per Minute at Vehicle Speeds				Fluid Ounces of finished spray per acre
	5 mph	10 mph	15 mph	20 mph	
0.03 - 0.06*	9.0-18.0	18.0-36.0	27.0-54.0	36.0 - 72.0	3.0-6.0
<b>For A 1:4</b>					
<b>Dilution Mix 1 part Malathion 8E with 4 parts Suitable Fuel Oil or Water</b>					
<b>Apply as follow:</b>					
Lbs. A.I./Acre	Application Rates Fluid Ounces per Minute at Vehicle Speeds				Fluid Ounces of finished spray per acre
	5 mph	10 mph	15 mph	20 mph	
0.03 - 0.06*	11.25-22.5	22.5-45.0	33.75-67.5	45.0-90.0	3.75-7.5

\*Use higher rate of application when vegetation is dense and/or mosquito populations are heavy.

**OPERATING EQUIPMENT**

Each nonthermal aerosol generator used for dispersal of MALATHION 8 AQUAMUL to control adult mosquitoes must have minimum capability of producing the droplet spectrum described under

**Ground-Based Application.** (See Restrictions on who can use ground based ULV equipment)

The initial determination of droplet size is made after the unit is installed in a vehicle and prior to its use in mosquito control operations. Recheck the unit frequently to insure that proper droplet size is maintained for each operation. Determination of droplet size every two months is usually sufficient if the unit has been maintained in good operating condition. Equipment manufacturer's instructions setting forth cleaning and maintenance of the unit must be followed. The unit must be inspected before each operation to correct any leaks or obstructions in the spray system; to detect whether the nozzle, hoses, or other parts are worn and need replacement; to insure that the flow meter is properly calibrated; and to determine that the pressure recommended by the manufacturer is being maintained.

**Flow Rate**

- Must be regulated by accurate flow meter.
- not greater than 1 gallon per hour at 5 mph, 2 gallons per hour at 10 mph, 3 gallons per hour at 15 mph, or 4 gallons per hour at 20 mph.

**Nozzle Direction**

- rear of the vehicle.
- upward at an angle of 45° or more.

**Vehicle Speed**

- not greater than 20 mph.
- shut off spray equipment when vehicle is stopped.

**IMPORTANT** - Spray droplets of undiluted MALATHION 8E will permanently damage automobile paint unless all the conditions described and recommended in this label are met. If accidental exposure does occur, the vehicle should be washed at once.

**MOSQUITO CONTROL IN POPULATED AND RURAL AREAS**

**Adult mosquito control over cities, towns, and other areas where automobiles, trailers, trucks, and pleasure boats are present:**

Apply 3.6 fluid ounces Malathion 8 Aquamul only when weather conditions are favorable. Wind and rising air currents may cause undesirable spray drift and reduce insect control.

**Adult Mosquitoes on Rangeland, Pasture, and Other Uncultivated Non-Agricultural Areas (Wastelands, Roadsides):** Apply MALATHION 8 AQUAMUL at the rate of 2.8 fluid ounces in 2-8 quarts of water per acre for control of adult mosquitoes. The maximum

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application rate is 0.92 lb ai/A for pasture and 0.61 lb ai/A for rangeland; PHI is 12 hours. Pasture: Limit use to 2 applications per year and a 30-day retreatment interval. Application may be made via ground or aerial equipment. This product can be mixed with a synergized pyrethrin emulsifiable concentrate (such as 6% pyrethrin +.60% PBO) in accordance with the most restrictive of label limitations and precautions indicated on both this and the tank-mixed product. Label rates must not be exceeded. This product may not be mixed with any product bearing a label which specifically prohibits such mixing. Prior to tank mixing large quantities mix a small amount in a glass jar to verify that the products are physically compatible. Depending upon your operation needs, the amount of synergized pyrethrin can be reduced or adjusted. Application rates of this product and droplet distribution requirements remain the same as for this product used alone.

Rangeland: Outside of government programs, limit use to spot treatment only for grasshoppers and mosquito/fly control.

**STORAGE AND DISPOSAL**

**PROHIBITIONS:** Do not contaminate water, food, or feed by storage and disposal. Open dumping is prohibited. Do not reuse empty container. Do not store under conditions which might adversely affect the container or its ability to function properly.

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** MALATHION 8 AQUAMUL should be stored in the original unopened container in a secure, dry place. Do not contaminate with other pesticides or fertilizers. The product should never be heated above 55°C (131°F), and should not be stored for long periods of time at a temperature in excess of 25°C (77° f). Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.

**PESTICIDE DISPOSAL:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

**CONTAINER DISPOSAL:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available.

**Containers equal to or less than 5 gallons:** Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container % full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**For containers greater than 5 gallons or 50 pounds:** Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

**For refillable containers:** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full of water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC - 1-800-424-9300.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

**BEFORE BUYING OR USING THIS PRODUCT**, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. To the extent consistent with applicable law, the buyer or user of this product assumes all such inherent risks.

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Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL AND TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THIS PRODUCT IS SOLD "AS IS," AND LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL AND TO THE EXTENT REQUIRED BY APPLICABLE LAW, BUYER OR USER MUST SEND WRITTEN NOTICE OF ITS CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, P.O. BOX 1286, GREELEY, CO 80632-1286.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE BUYER'S OR USER'S EXCLUSIVE REMEDY FOR ANY INJURY, LOSS, OR DAMAGE RESULTING FROM THE HANDLING OR USE OF THIS PRODUCT, INCLUDING BUT NOT LIMITED TO CLAIMS OF BREACH OF WARRANTY OR CONTRACT, NEGLIGENCE, STRICT LIABILITY, OR OTHER TORTS, SHALL BE LIMITED TO ONE OF THE FOLLOWING, AT THE ELECTION OF LOVELAND PRODUCTS, INC. OR THE SELLER: DIRECT DAMAGES NOT EXCEEDING THE PURCHASE PRICE OF THE PRODUCT OR REPLACEMENT OF THE PRODUCT. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LOVELAND PRODUCTS, INC. AND THE SELLER SHALL NOT BE LIABLE TO THE BUYER OR USER OF THIS PRODUCT FOR ANY CONSEQUENTIAL, SPECIAL, OR INDIRECT DAMAGES, OR DAMAGES IN THE NATURE OF A PENALTY.

**FORMULATED FOR  
LOVELAND PRODUCTS, INC.  
P.O. BOX 1286, GREELEY, COLORADO  
80632-1286**

[EPA approval date]