

66330-220

9/27/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

SEP 27 2012

Rodney Akers  
Regulatory Manager  
Arysta LifeScience North America, LLC  
15401 Weston Parkway, Suite 150  
Cary, NC 27513

Subject: Submission of amended labeling per May 2009 Malathion RED Label Table  
EPA Reg. No. 66330-220  
Submissions dated March 15, 2010

Dear Mr. Akers:

The proposed labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable under FIFRA § 3(c)(5) provided that you submit two copies of your final printed label before you release the product for shipment. Products shipped after 12 months from the date of this amendment or the next printing of the label whichever occurs first, must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e).

The Basic Confidential Statement of Formula (CSF) dated 3/15/10 is acceptable. All other CSF's including Alternates have been superseded by this new CSF. This has been added to your record.

Your product has met and complied with the risk mitigation provisions of the Malathion RED and therefore your product is reregistered pursuant to FIFRA § 4(g)(2)(C). But note, EPA is currently reassessing the cumulative impacts of organophosphates and that review may impact your product once complete. A stamped copy is enclosed for your records. If you have any questions, please contact Marianne Lewis at (703) 308-8043 or [lewis.marianne@epa.gov](mailto:lewis.marianne@epa.gov).

Regards,

A handwritten signature in black ink that reads "Venus Eagle".

Venus Eagle, PM 01  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

Enclosure

2/23

**ACCEPTED**  
9/27/12  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
Registered under  
EPA Reg. No. 66330-220

# MALATHION 5 EC

Malathion 5 EC is a water emulsifiable  
spray concentrate insecticide and miticide

**ACTIVE INGREDIENT:**

Malathion: 0,0-dimethyl phosphorodithioate of diethyl mercaptosuccinate ..... 56.00%

**INERT INGREDIENTS:** ..... 44.00%

**TOTAL:** ..... 100.00%

Contains Petroleum Distillates. (Contains 5 pounds of Malathion per gal)

## KEEP OUT OF REACH OF CHILDREN WARNING / AVISO

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.)

EPA Reg. No. 66330-220

EPA Est. No.

<b>FIRST AID</b> <b>Organophosphate</b>	
<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>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 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 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 INHALED:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or 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>
<p><b>NOTE TO PHYSICIAN:</b> Contains petroleum distillate. May pose an aspiration pneumonia hazard. This product is an organophosphate ester that inhibits cholinesterase. This product may cause cholinesterase inhibition. Atropine is antidotal. 2-PAM may be effective as an adjunct to atropine. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For 24 hour emergency medical assistance: Call PROSAR at 1-866-303-6952 or 1-651-632-8946 if calling from outside the U.S.</p>	

See Additional Precautionary Statements Inside

**Manufactured For:**

**Arysta LifeScience North America, LLC**

**15401 Weston Parkway, Suite 150**

**Cary, NC 27513**

ADXXXXXXXXXX

Net Contents: \_\_\_\_\_

For product use information call 866-761-9397

**PRECAUTIONARY STATEMENTS**  
**Hazards to Humans and Domestic Animals**  
**WARNING**

Causes substantial but temporary eye damage. Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray mist.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

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

If you want more options, follow the instructions for category F on an EPA chemical resistance category selection chart.

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

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves
3. Shoes plus socks
4. Chemical-resistant headgear for overhead exposure
5. Protective eyewear
6. Chemical-resistant apron (dip applications)

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

**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.

<p><b>USER SAFETY RECOMMENDATIONS</b></p> <p>Users should:</p> <ol style="list-style-type: none"> <li>1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.</li> <li>2. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.</li> <li>3. 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.</li> </ol>
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### ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic organisms, including fish and 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. 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 washwater or rinsate. 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.

### PHYSICAL AND CHEMICAL HAZARDS

Combustible. Do not use or store near heat or open flames.

### 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.

### 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 and restricted-entry intervals. 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. 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:

1. Coveralls
2. Shoes plus socks
3. Chemical-resistant gloves made of any waterproof material.

### NON-AGRICULTURAL USE REQUIREMENTS

The requirements of 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**

Do not combine emulsifiable liquids with wettable powders in the same spray tank unless previous use of the materials being combined has proven them to be physically compatible.

Application may not be made around bodies of water where fish or shellfish are grown and/or harvested commercially.

All ULV formulations must be packaged in closed mixing and loading systems.

Do not apply this product through any type of irrigation system.

For proper mixing, fill the spray tank at least 3/4 full with water before Malathion 5 EC formulation is added. Mechanical agitation or recirculation through the pump by-pass to the tank is usually sufficient for maintaining a good dispersion. Rinse empty container with water and drain into spray tank - repeat twice more. Consult your State Experiment Station as to the timing of applications.

**Buffer Zones For Aerial Application**

When making a Non-ULV application with aerial application equipment, a minimum buffer zone of 25 feet must be maintained along any water body.

When making a ULV application with aerial application equipment, a minimum buffer zone of 50 feet must be maintained along any water body.

**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.

For groundboom and aerial applications, use only medium or coarser spray nozzles according to ASAE (S572) definition for standard nozzles, or a volume-mean diameter (VMD) of 300 microns or greater for spinning atomizer nozzles. In conditions of low humidity and high temperatures, applicators should use a coarser droplet size.

**Wind Direction and Speed**

Make aerial or ground applications when the wind velocity favors on target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 15 mph. Avoid applications when wind gusts approach 15 mph. 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 groundboom 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 rows 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. The minimum practical boom length should be used and must not exceed 75% of wing span or 90% rotor diameter.

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.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Malathion 5 EC should be stored in the original unopened container in a secure, dry place. Do not contaminate with other pesticides or fertilizers. This 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). Do not store at temperatures below freezing, as such low temperatures may be harmful to this product.

**PESTICIDE DISPOSAL:** To avoid wastes, use all materials 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. 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 ¼ 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. Offer for recycling if available, or dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC at 1-800-424-9300 or 1-703-527-3887 if calling from outside of the U.S.

**APPLICATION INSTRUCTIONS**

**VEGETABLES**

Apply in a minimum of 30 gal by ground equipment or 5 gal by air equipment unless otherwise specified. Best results are obtained with uniform coverage. Use higher listed rate when foliage is heavy or infestation is severe.

**NOTE:**

Pre-Harvest interval days are indicated as (PHI) after each crop.  
Restricted Entry Interval hours are indicated as (REI) after each crop.

**BEANS ULV APPLICATION ONLY IN CLOSED MIXING AND LOADING SYSTEMS:**

**(Green Beans, Lima Beans, Navy Beans, Red Kidney Beans, Snap Beans, Wax Beans, Cowpeas and Blackeyed Peas):**

**(PHI 1) (REI 12)**

Aphids, Bean leaf beetles, Blister beetles, Cucumber beetles, Potato leafhoppers, Lygus bugs - 1 pt per A in 2 gal of water.

Japanese beetle, Mexican bean beetle - 1 pt per A in 2 gal of water. Red Spider mites - 1 pt per A in 2 gal of water.

Do not feed or graze forage, hay or straw to livestock. The maximum application rate is 0.61 lb ai (16 fl oz of formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**DRY BEANS ULV APPLICATION ONLY IN CLOSED MIXING AND LOADING SYSTEMS-**

**(California, Oregon, Washington and Idaho only): (PHI 1) (REI 12)**

Lygus bugs - 1 pt per A, 1 pt per A (air) in 2 gal of water.

Do not feed or graze forage, hay or straw to livestock.

**BEETS (Garden and Table) DO NOT APPLY TO SUGAR BEETS:**

**(PHI 7) (REI 12)**

Aphids - 1.5 to 2 pt per A.

The maximum application rate is 1.25 lb ai (32 fl oz. of formulated product) per acre; the maximum applications per year is 3, and the minimum retreatment interval is 7 days.

**BROCCOLI: (PHI 3) (REI 48)**

Aphids, Cabbage looper, Imported Cabbageworm - 1 to 2 pt per acre. The maximum application rate is 1.25 lb ai (32 fl oz. of formulated product) per acre; the maximum number of applications per year is 2; and the minimum treatment interval is 7 days.

**BRUSSELS SPROUTS: (PHI 7) (REI 48)**

Aphids - 1 to 2 pt per A. The maximum application rate is 1.25 lb ai (32 fl oz. of formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**CABBAGE: (PHI 7) (REI 48)**

Aphids, Cabbage looper, Imported cabbageworm - 1 to 2 pt per acre.

Diamondback moth, webworm - 2 pt per acre. For control of caterpillars on summer and fall plantings, begin when true leaves appear. On other plantings, and for control of other insects, begin when insects appear.

The maximum application rate is 1.25 lb ai (32 fl oz. of formulated product) per acre; the maximum number of applications per year is 6; the the minimum retreatment interval is 7 days.

**CAULIFLOWER: (PHI 7) (REI 48)**

Diamondback moth - 1 to 2 pt. Aphids - 1 to 2 pt.

The maximum application rate is 1.25 lb ai (32 fl oz. of formulated product) per acre; the maximum number of applications per year is 2, and the minimum retreatment interval is 7 days.

**CELERY: (PHI 7) (REI 24)**

Aphids, Spider mites - 1.5 pt per A. To be applied to fresh leaves and stalks only. Do not use on crops grown for seed and oil. The maximum application rate is 1.5 lb ai (38 fl oz of formulated product) per acre; the maximum applications per year is 2; and the minimum retreatment interval is 7 days.

**COLLARDS: (PHI 7) (REI 12)**

Aphids - 1.5 pt per A.

Harlequin cabbage bug - 1 pt per A.

For control of caterpillars on summer and fall plantings, begin when true leaves appear. On other plantings, and for control of other insects, begin when insects appear.

The maximum application rate is 1 lb ai (25 fl oz of formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**CUCUMBERS: (PHI 1) (REI 24)**

Aphids, Pickleworms, Spider mites - 1.5 to 2 pt per A. Squash vine borer - 2.75 pt per A.

Cucumber beetle, Leaf miner - 2 pt per A. Do not apply to cucumbers unless plants are dry. The maximum application rate is 1.75 lb ai (44 fl oz of formulated product) per acre Maximum number of applications per year is 2, and the minimum retreatment interval is 7 days.

**DANDELION, PARSLEY, PARSNIP: (PHI 7) (REI 24)**

Aphids - 1.5 to 2 pt per A.

The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year for Dandelion and Parsley is 2 – the number of applications per year for Parsnip is 3; and the minimum retreatment interval is 7 days.

**SWISS CHARD: (PHI 14) (REI 24)**

Aphids – 1.5 pt

The maximum application rate is 1 lb ai (25 fl oz of formulated product) per acre; the maximum number of applications per year is 2, and the minimum retreatment interval is 7 days.



**WATERCRESS: (PHI 3) (REI 24)**

Aphids - 1.5 to 2 pt per A.

The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre, OR the REI is 12 hours and the maximum application rate is 1 lb ai (25 fl oz formulated product) per acre.

The maximum number of applications per year is 5; and the minimum retreatment interval is 3 days.

**EGGPLANT: (PHI 3) (REI 12)**

Aphids, Spider mites - 1 pt per A.

Lacebugs - 2.5 pt per A.

The maximum application rate is 1.56 lb ai (40 fl oz formulated product) per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 5 days.

**ENDIVE: (PHI 7) (REI 24)**

Aphids, Spider mites - 1.5 to 2 pt per A.

The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**GARLIC, SHALLOTS: (PHI 3) (REI 24)**

Aphids, Thrips - 1.5 to 2 pt per A.

The maximum application rate is 1.56 lb ai (40 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**HOPS: (PHI 10) (REI 24)**

Aphids, Spider mites - 1 pt per A.

The maximum application rate is 0.63 lb ai (16 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**KALE: (PHI 7) (REI 12)**

Aphids, Cabbage looper, Imported cabbageworm - 1.5 pt per A.

Webworm, Diamondback moth - 1.5 pt per A. For control of caterpillars on summer and fall plantings, begin when true leaves appear. On other plantings, and for control of other insects, begin when insects appear.

The maximum application rate is 1 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 5 days.

**KOHLRABI: (PHI 7) (REI 24)**

Aphids - 1 to 2 pt per A.

Cabbage looper, Diamondback moth, Imported cabbageworm, Webworm - 2 pt per A.

The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**LEEKs: (PHI 3) (REI 24)**

Aphids - 1 to 2 pt per A.

Onion maggot flies - 2.5 pt per A.

Thrips - 2.5 pt per A.

The maximum application rate is 1.56 lb ai (40 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**HEAD LETTUCE: (PHI 14) (REI 24)**

**LEAF LETTUCE: (PHI 14) (REI 24)**

Aphids, Leafhoppers, Spider mites - 2 pt per A.

Cabbage looper - 3 pt per A.

The maximum application rate is 1.88 lb ai (48 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 5 days for leaf lettuce and 6 days for head lettuce.

**MUSHROOMS: (PHI 1) (REI 12)**

Mites, Phorid and Sciarid flies - 2.5 pt in 130 gal of water; or, 2 tablespoons in 3 gal of water per 1,000 sq ft of bed. Make thorough applications as soon after picking as possible. The maximum application rate is 1.7 lb ai (43 fl oz formulated product) per A; the maximum number of applications per year is 4; and the minimum retreatment interval is 3 days.

**MUSTARD GREENS: (PHI 7) (REI 12)**

Aphids, Cabbage Looper, Imported cabbageworm, Flea beetles - 1.5 pt per A. For control of caterpillars on summer and fall plantings, begin when true leaves appear. On other planting, and for control of other insects, begin when insects appear. The maximum application rate is 1 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 5 days.

**OKRA: (PHI 1) (REI 12)**

Aphids - 1.5 pt per A.

Japanese beetle - 1 pt 14 oz per A. Make no application after pods start to form. The maximum application rate is 1.2 lb ai (30 fl oz formulated product) per acre; the maximum number of applications per year is 5; and the minimum retreatment interval is 7 days.

**ONIONS: (PHI 3) (REI 12)**

Onion maggots - 1.5 to 2.5 pt per A.

Onion thrips - 1.5 to 2 pt per A. The maximum application rate is 1.56 lb ai (40 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**PEAS: (PHI 3) (REI 12)**

Aphids - 1.5 pt per A.

Grasshoppers - 1.5 pt per A.

Leafhoppers - 1.5 pt per A.

The maximum application rate is 1.0 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days. Do not use on pea vine and hay.

**PEPPERMINT, SPEARMINT: (PHI 7) (REI 12)**

Aphids, Flea beetles, Leafhoppers, Spider mites - 1.5 pt per A.

The maximum application rate is 0.94 lb ai (24 fl oz formulated product) per acre; the maximum number of applications per year is 3. The minimum retreatment interval is 7 days.

**PEPPERS: (PHI 3) (REI 12)**

Aphids - 1 to 2.5 pt per A.

Pepper maggots - 2.5 pt per A. The maximum application rate is 1.56 lb ai (40 fl oz formulated product) per A; the maximum number of applications per year is 2; and the minimum retreatment interval is 5 days.

**WHITE POTATOES: (PHI 0) (REI 12)**

Aphids, Grasshoppers, Leafhoppers - 2 pt per A.

False chinch bugs - 1.5 pt per A.

Mealybugs - 2 to 2.5 pt per A. The maximum application rate is 1.56 lb ai (40 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**RADISH, (PHI 7) (REI 12)**

Aphids - 1.5 pt per A. The maximum application rate is 1 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**HORSERADISH: (PHI 7) (REI 24)**

Aphids - 1.5 to 2 pt per A. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**RICE:**

Rice leaf miner - 2 pt per A. Make first application shortly after the first rice blades appear on the surface of the water.

Rice stink bugs - 15 fl oz per A. Apply by air in 2 gal of water per A during the early milk and dough stage of growing 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.

The maximum Non-ULV application rate is: 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 2, the minimum retreatment interval is 7 days; the PHI is 7 days; the REI is 12 hours.

ULV Application Only in a Closed Mixing and Loading System: The maximum ULV rate is: 0.61 lb ai (15 fl oz formulated product) per acre; the maximum number of applications per year is 2; the minimum retreatment interval is 7 days; the PHI is 14 days; the REI is 12 hours.

**RUTABAGA: (PHI 7) (REI 12)**

Aphids - 1.5 pt per A. The maximum application rate is 1 lb ai (25 fl oz formulated product) per A; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**SPINACH: (PHI 7) (REI 12)**

Aphids - 1.5 pt per A. The maximum application rate is 1 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**SQUASH, Summer: (PHI 1) (REI 24)**

Aphids, Leaf miners, Spider mites, Pickleworm - 2 pt per A. Cucumber Beetles, Squash vine borer - 2.75 pt per A. Do not apply to squash unless plants are dry. The maximum application rate is 1.75 lb ai (44 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

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**SQUASH, Winter: (PHI 1) (REI 12)**

Aphids, Leaf miners, Spider mites, Pickleworm, Cucumber Beetles, Squash vine borer – 1.5 pt per A. Do not apply to squash unless plants are dry. The maximum application rate is 1.0 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**STRAWBERRIES: (PHI 3) (REI 12)**

Aphids, Spider mites - 1.5 pt per A.  
Field crickets, Lygus bugs, Spittlebugs, Thrips - 1.5 to 3 pt per A.  
Potato leafhopper, Strawberry leafroller, Strawberry root weevil, Whiteflies - 1.5 to 2.5 pt per A. The maximum application rate is 2.0 lb ai (51 fl oz formulated product) per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 7 days.

**SWEET CORN: (PHI 5)**

(REI 72 hrs for detassling, 12 hrs for other activities)  
Japanese beetle - 1.5 pt per A. Injury may occur in the whorl or the silks. The maximum application rate is 1.0 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 5 days.

**SWEET POTATOES: (PHI 3) (REI 12)**

Leafhoppers - 1.5 to 2 pt per A.  
Morninglory leaf miner - 2.5 pt per A.  
The maximum application rate is 1.56 lb ai (40 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**TOMATOES: (PHI 3) (REI 12)**

Aphids - 1.5 pt per A.  
Drosophila - 2.5 pt per A.  
Spider mites - 1.5 pt per A. NOTE: Do not apply within 1 day of harvest for spider mite control.

The maximum application rate is 1.56 lb ai (40 fl oz formulated product) per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 5 days.

**TURNIP (ROOTS): (PHI 7) (REI 12)**

Aphids, Cabbage looper, Imported cabbageworm - 1 to 2 pt per A. For control of caterpillars on summer and fall plantings, begin when true leaves appear. On other plantings, and for control of listed insects, begin when insects appear. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**TURNIP (GREENS): (PHI 7) (REI 12)**

Aphids, Cabbage looper, Imported cabbageworm – 1 to 2 pt per A. For control of caterpillars on summer and fall plantings, begin when true leaves appear. On other plantings, and for control of listed insects, begin when insects appear. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 5 days.

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## FRUIT AND NUTS

**NOTE:** Pre-Harvest Interval **days** indicated as **(PHI)** after each **crop**.  
Restricted entry interval **hours** are listed as **(REI)** after each **crop**.

### **APRICOTS: (PHI 7) (REI 12)**

Aphids, Codling moth, European fruit lecanium, Orange tortrix, Soft brown scale, Terrapin scale - 1.5 to 2 pt per 100 gal, (2 pt 6 oz. per A). The maximum application rate is 1.5 lb ai (38 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

### **AVOCADO: (PHI 7) (REI 48)**

Greenhouse thrips, Latania scale, Omnivorous looper, Orange tortrix, Soft brown scale - 1.5 pt per 100 gal, (4.5 pt per A).  
The maximum application rate is 4.7 lb ai (7.5 pt formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 30 days.

### **BLACKBERRY, BOYSENBERRY, DEWBERRY, LOGANBERRY, RASPBERRY:(PHI 1) (REI 12)**

Aphids, rose scale chafers, Japanese beetle, Leafhoppers, Mites, Thrips - 1.5 pt per 100 gal, (3 pt per A). The maximum application rate is 2.0 lb ai (51 fl oz formulated product) per acre; the maximum number of applications per year is 3, and the minimum retreatment interval is 7 days.

### **BLUEBERRIES: (PHI 1) (REI 12)**

Blueberry maggots - 1 pt per 100 gal plus 1.5 quarts Staley's Sauce Base No. 7 (protein hydrolysate bait). Apply in 100 gal of water per A.  
Cherry fruitworm - 1 pt per 100 gal, (2 pt per A).  
Cranberry fruitworm - 1 pt per 100 gal, (2 pt per A). Make first application at egg hatch and repeat applications every 5 days.  
Japanese beetle - 0.75 pt per 100 gal, (1.5 pt per A). Make application when first berries turn blue and repeat at 10 day intervals. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 5 days.

### **CHERRY: (PHI 3) (REI 12)**

Black cherry aphid, Fruit-tree leafroller - 1.5 pt per 100 gal, (2.75 pt per A).  
Cherry fruit fly, Japanese beetle - 1 pt per 100 gal, (2.75 pt per A).  
Do not apply more than 7 pounds of actual Malathion 5 EC per acre per year to cherry trees. Injury may occur on certain varieties of sweet cherries.

The maximum application rate is 1.75 lb ai (45 fl oz formulated product) per acre; the maximum number of applications per year is 4; and the minimum retreatment interval is 3 days.

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**CITRUS (Grapefruit, Lemon, Lime, Orange, Tangerine, Tangelo): (PHI 7) (REI 72)**

The maximum application rate in CA is EITHER 7.5 lb ai (12 pt formulated product) per acre and the maximum number of applications per year is 1, OR the Restricted-Entry Interval is 12 hours, the maximum application rate is 1.5 lb ai (38 fl oz formulated product) per acre; the maximum number of applications per year is 3, and the minimum retreatment interval is 30 days.

The maximum application rate in all other states is EITHER 4.5 lb ai (7 pt formulated product) per acre with a maximum number of applications per year of 1; OR the Restricted-Entry Interval is 12 hours, the maximum application rate is 1.5 lb ai (38 fl oz formulated product) per acre; the maximum number of applications per year is 3, and the minimum retreatment interval is 30 days.

Black scale (single and off-brooded), California red scale, Citricola scale, Purple scale, Soft brown scale, Yellow scale - 1 to 1.5 pt/100 gal. Do not apply when trees are in bloom.

Citrus red mites, Thrips - 2.33 pt/A. Apply in 200 gal of water per acre. Do not apply when trees are in bloom. Florida purple scale, Florida red scale - 2 pt per 100 gal.

**CURRENTS: (PHI 3) (REI 12)**

Japanese beetles - 1.5 pt per 100 gal, (2 pt per A). Rose chafers, Mites - 1 pt per 100 gal, (2 pt per A). The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 3. The minimum retreatment interval is 7 days.

**FIGS: (PHI 5) (REI 24)**

Dried fruit beetles, Vinegar flies - 3 pt per A plus 1 to 2 gal unsulfured molasses.

The maximum application rate is 2.0 lb ai (51 fl oz formulated product) per acre; OR the Restricted-Entry Interval is 12 hours and the maximum application rate is 1.5 lb ai (38 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 5 days].

**GOOSEBERRIES: (PHI 3) (REI 12)**

Japanese beetle- 1.5 pt per 100 gal, (2 pt per A). Rose chafers, Mite - 1 pt per 100 gal, (2 pt per A). The maximum application rate is 2.0 lb ai (51 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**GRAPES: (PHI 3) (REI 72 hrs for girdling and tying, 24 hrs for all other activities)**

GRAPES (Raisin, Table, Wine):

Leafhoppers, Spider mites - 1.5 pt per 100 gal, (3 pt per A).

European fruit lecanium - 1.5 pt per 100 gal. Make full coverage applications when newly hatched nymphs are migrating over vines, usually shortly after bloom.

Mealybugs - 1.5 pt per A. Apply in 50 to 100 gal. The rates for use on grapes are based on a standard of 200 gal per A dilute spray. Injury may occur on grapes of Almeria, Cardinal, Italia and Ribier varieties when sprays containing Malathion 5 EC are applied after clusters appear.

GRAPE VINES (Overwintering on nursery stock only):

Grape phylloxera - 3 pt per 100 gal. Remove excess soil from the roots and dip in the Malathion 5 EC solution. Submerge the entire root system for 5 minutes. Keep the solution agitated at all times.

The maximum application rate is 1.88 lb ai (48 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 14 days.

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**GUAVA: (PHI 2) (REI 12)**

Drosophilia - 1 to 1.25 pt per A in sufficient water to provide thorough coverage of foliage. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 13; and the minimum retreatment interval is 3 days.

**KUMQUAT: (PHI 7) (REI 48)**

Black scale (single and off-brooded), California red scale, Citricola scale, Purple scale, Soft brown scale, Yellow scale - 1 to 1.5 pt per 100 gal. Do not apply when trees are in bloom.

Citrus red mites, Thrip - 2.5 pt per A. Apply in 200 gal of water per acre. Do not apply when trees are in bloom. Florida purple scale, Florida red scale - 2 pt per 100 gal.

The maximum application rate is 4.5 lb ai (7 pt of formulated product) per A; the maximum number of applications per year is 1; and the minimum retreatment interval is 30 days.

**MACADAMIA NUTS: (PHI 1) (REI 12)**

Green stink bugs - 1.5 pt per 100 gal. Apply when insects start to feed on the nuts and repeat up to 6 times. Do not apply more than 5.64 pounds total of actual Malathion 5 EC per acre per year to macadamia nut trees.

The maximum application rate is 0.94 lb ai (24 fl oz formulated product) per acre; the maximum number of applications per year is 6; and the minimum retreatment interval is 7 days.

**MANGO: (PHI 1) (REI 12)**

Drosophilia - 1 to 1.25 pt per A in sufficient water to provide thorough coverage of foliage.

The maximum application rate is 0.9375 lb ai (24 fl oz formulated product) per acre; the maximum number of applications per year is 10; and the minimum retreatment interval is 7 days.

**NECTARINES: (PHI 7) (REI 24)**

Spider mites - 1 to 2 pt per 100 gal, (3 to 4.5 pt per A). Plum curculio - 2 pt per 100 gal, (4.5 pt per A). Malathion 5 EC may cause fruit spotting on nectarines.

The maximum application rate is 3.0 lb ai (4.5 pt formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**PASSION FRUIT: (PHI 3) (REI 12)**

Drosophilia - 1 to 1.25 pt per A in sufficient water to provide thorough coverage of foliage.

The maximum application rate is 1.0 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 8; and the minimum retreatment interval is 7 days.

**PAPAYA: (PHI 1) (REI 12)**

Aphids, Mealybugs - 1.5 to 2 pt per 100 gal.

The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 8; and the minimum retreatment interval is 3 days.

**PEACHES: (PHI 7) (REI 24)**

Black cherry aphid, Black peach aphid, European red mite, Green peach aphid, Rusty plum aphid, Japanese beetle, Spider Mites - 1 pt per 100 gal, (3 pt per A).

Oriental fruit moth, Plum curculio - 2 pt per 100 gal (4.75 pt per A) Cottony peach scale, European fruit lecanium, Terrapin scale - 2 pt per 100 gal. Make full coverage applications at completion of hatching. Do not apply more than 9 pounds of actual Malathion 5 EC per acre per year to peach

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trees. The maximum application rate is 3.0 lb ai (4.75 pt formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 11 days.

**PECANS: (PHI 7) (REI 24)**

Aphids, Spider mites, Walnut aphid - 1.5 to 2 pt per 100 gal, (4 pt per A).

European red mite - 1.25 pt per 100 gal, (4 pt per A). Apply when buds begin to develop. Pecan nut casebearer, Walnut husk fly - 1.25 pt per 100 gal, (4 pt per A). Apply after first generation eggs begin to hatch. The maximum application rate is 2.5 lb ai (4 pt formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**WALNUTS: (PHI 7) (REI 24)**

Aphids, European red mite - 0.5 pt per 100 gal, (1.5 to 3 pt per A).

Walnut husk fly - 0.5 pt per 100 gal, (1.5 to 3 pt per A). Apply with conventional sprayer. For bait sprays, combine a feeding stimulant such as Nulure or Staley's Sauce Base No. 2 or No. 7 (protein hydrolysate baits) at the rate of 2 qt per A with Malathion 5 EC. Apply in 500 gal of water per acre with air-carrier type sprayer. The maximum application rate for Malathion 5 EC is 2.5 lb ai (4 pt formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.



## FIELD CROPS AND PASTURE AND RANGE GRASSES

Apply in a minimum of 30 gal by ground equipment or 5 gal by air equipment unless otherwise specified. Best results are obtained with uniform coverage. Use higher listed rate when foliage is heavy or infestation is severe.

**NOTE:** Pre-Harvest Interval **days** indicated as **(PHI)** after each **crop**.  
Restricted-Entry Interval **hours** indicated as **(REI)** after each **crop**.

### **ALFALFA: (PHI 0) (REI 12)**

Alfalfa weevil larvae, Aphids, Grasshoppers, Lygus bugs, Potato leafhoppers, Spider mites, Spittlebugs, Stink bugs - 1.5 to 2 pt per A.

Armyworms - 2 pt per A.

Clover leaf weevil - 1.5 pt per A.

Vetch bruchid - 1.5 - 2 pt per A. Apply to alfalfa in bloom only in the evening or early morning when bees are not working in the field and/or are not hanging on outside of hives.

The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 2 per cutting; and the minimum retreatment interval is 14 days.

### **CLOVER: (PHI 0) (REI 12)**

Alfalfa weevil larvae, Aphids, Grasshoppers, Lygus bugs, Potato leafhoppers, Spider mites, Spittlebugs - 1.5 pt per A. Do not apply to clover in bloom. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 2 per cutting; the minimum retreatment interval is 14 days.

### **CORN (Field): (PHI 7) (REI 72 hrs for detassling, and 12 hours for all other activities)**

Aphids, Corn earworm, Corn rootworm adults, Grasshoppers, Sap beetle, Thrips - 1.5 pt per A.

Armyworms - 1.5 pt per A. For control of corn earworm and sap beetles, begin treatments when 10% of the ears show silk. Repeat applications at 7 day intervals until 2 applications have been made. Do not apply within 5 days of forage use. Injury may occur in the whorl and silk stages with Malathion 5 EC, especially at low dilution rates.

The maximum application rate is 1.0 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

### **COTTON: (PHI 7) (REI 48)**

Brown cotton leafworm, Cotton aphid, Cotton leafworm, Cotton leafperforator, Desert spider mite, Leafhoppers, Lygus bugs, Thrips, Whiteflies -1.5 to 2 pt per A.

Boll weevil - 2 to 4 pt per A.

Cotton fleahoppers - 1 to 1.5 pt per A. Consult local agricultural authorities for exact time of application.

Fall armyworms, Garden webworms, Grasshoppers - 1.5 to 3 pt. Lygus bugs, Thrips - 1 to 4 pt per A. The maximum application rate is 1.22 lb ai (4 pt formulated product) per acre; the maximum number of applications per year is 3. Minimum application interval is 7 days. PHI is 7 days. REI is 2 days.

**USDA Rate Specification on Cotton for BWE Program. For use only under the US Boll Weevil Eradication Program.**

**Applications made for Boll Weevil Eradication:**

Treatment supervisors and applicators must be aware of all sensitive areas near cotton fields, including: schools, hospitals, nursing homes, churches, occupied dwellings, parks, recreation areas, bodies of water, and potential habitat for threatened and endangered species.

For aerial applications, spray equipment must be adjusted so that the volume median diameter is 100 microns (DV 0.5=100um) or greater. The effects of flight speed, nozzle angle and type, and pump pressure on the droplet size spectrum must be considered.

For aerial applications, the spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and outmost nozzles must not be placed beyond 75% of the wingspan or rotor diameter.

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.

Global positioning systems (GPS) should be used to guide pilots and to monitor each application.

Ground equipment should utilize a controlled air flow to facilitate particle size and spray deposition, and should be used at a vehicle speed of 4 to 10 mph. Spray equipment must be adjusted so that the volume median diameter is 100 microns (Dv 0.5=100um) or greater.

Ground equipment should be used to treat field edges when possible, covering areas that cannot be treated effectively with aircraft because of obstructions which may affect applicator safety, or where there is boll weevil over-wintering habitat adjacent to the treatment area, or if there are adjacent sensitive areas.

Do not apply when wind velocity exceeds 10 mph. Treatments should be applied when winds are calm, or moving away from adjacent sensitive areas.

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.

Do not make aerial or ground applications into temperature inversions. Inversions are characterized by stable air and increasing temperatures with height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

Applications will not be made when people are in or near infested cotton fields or, to the degree possible, when people are present in or near adjacent sensitive areas.

Application will not be made when rainfall is imminent.

Before beginning treatment, program personnel shall notify all registered apiarists in or near the treatment area of the date and approximate time of treatment.

**FLAX: (PHI 52)(REI 12)**

Grasshoppers - Apply 13 oz per A. Do not graze or feed forage to livestock. The maximum application rate is 0.5 lb ai (13 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**GRASSES (Barnyardgrass, Canarygrass, Fescue, Orchardgrass, Red top, Timothy, Yellow foxtail): (PHI 0) (REI 12)**

Cereal leaf beetle - 1 to 1.5 pt per A. May be applied on the day of grazing. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre the maximum number of applications per year is 1.

**LESPEDEZA: (PHI 0) (REI 12)**

Grasshoppers - 1.5 to 2 pt per A. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications is 2 per cutting; and the minimum retreatment interval is 14 days.

**LUPINE ULV APPLICATION ONLY IN A CLOSED MIXING AND LOADING SYSTEM:**

**(PHI 1) (REI 12)**

Grasshoppers - 1.5 to 2 pt per A. The maximum application rate is 0.61 lb ai (16 fl oz formulated product) per acre; the maximum number of applications per year is 1.

**PASTURE AND RANGELAND: FOR ULV APPLICATION ONLY IN A CLOSED MIXING AND LOADING SYSTEM. (PHI 0) (REI 12)**

Aphids, Grasshoppers, Leafhoppers - 1 pt 7 oz per acre in 2 gal of water OR 1 pt 7 oz in 1 gal of diesel fuel oil per acre.

Armyworms - 1 pt 7 oz per acre in 2 gal of water OR 1 pt 7 oz in 1 gal of diesel fuel oil per A. The maximum application rate is 0.92 lb ai (23 fl oz formulated product) per acre; the maximum number of applications per year is 1 per cutting, the minimum application interval is 7 days.

**GRASS, FORAGE, HAY (PHI 0) (REI 12)**

Aphids, Grasshoppers, Leafhoppers – 1 pt 7 oz per acre or 1 pt in 1 gal of diesel fuel oil per acre  
Armyworms- 1 pt 7 oz per acre OR 1 pt 7 oz in 1 gal of diesel fuel oil per acre. The maximum application rate is 1.25 lb of ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 1 per cutting.

**POPCORN: (PHI 5) (REI 72 hrs for detassling, and 12 hrs for all other activities)**

Aphids, Corn rootworms, Grasshoppers, spider mites, thrips, Corn earworm - 1.5 pt per A.

Armyworms - 1.5 pt per A.

CAUTION: Injury may occur in whorl and silk stages with Malathion 5 EC, especially at low dilution rates. The maximum application rate is 1.0 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 2, and the minimum retreatment interval is 5 days.

**SALSIFY: (PHI 7) (REI 24)**

Aphids, Diamondback Moth, Flea beetle, Leafhoppers, Spider mites, Thrips - 1.5 to 2 pt per A. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**SMALL GRAINS**

Apply in a minimum of 30 gal by ground equipment or 5 gal by air equipment unless otherwise specified. Best results are obtained with uniform coverage. Use higher listed rate when foliage is heavy or infestation is severe.

**BARLEY: (PHI 7) (REI 12)**

Cereal leaf beetle - 1 to 1.5 pt per A.

English grain aphids, Grasshoppers, Greenbugs - 1.5 pt per A. Winter grain mite - 2 pt per A: Do not apply within 7 days of forage use. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum number of applications per year is 2; and the minimum retreatment interval is 7 days.

**OATS and WHEAT: (PHI 7) (REI 12)**

Cereal leaf beetle - 1 to 1.5 pt per A.

English grain aphids, Grasshoppers, Greenbugs - 1.5 pt per A. Winter grain mite - 1 pt 10 oz per A. Do not apply within 7 days of forage use. The maximum application rate is 1.0 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year for wheat and oat is 2; and the minimum retreatment interval is 7 days.

**RYE: (PHI 7) (REI 12)**

Cereal leaf beetle - 1 to 1.5 pt per A.

English grain aphids, Grasshoppers, Greenbugs - 1.5 pt per A. Winter grain mite - 1 pt 10 oz per A. Do not apply within 7 days of forage use. The maximum application rate is 1.0 lb ai (25 fl oz formulated product) per acre; the maximum number of applications per year is 3; and the minimum retreatment interval is 7 days.

**GRAIN SORGHUM: (PHI 7) (REI 12)**

Greenbugs - 1.5 pt per A.

Do not feed or graze forage, hay or straw to livestock.

The maximum application rate is 1.0 lb ai (25 fl oz formulated product) per acre; the maximum applications per year is 2; and the minimum retreatment interval is 7 days.

**VETCH: (PHI 0) (REI 12)**

Omnivorous leaf tier, Pea aphid, Vetch bruchid - 1.5 to 2 pt per A. May be applied on the day of grazing. The maximum application rate is 1.25 lb ai (32 fl oz formulated product) per acre; the maximum applications per year is 2 per cutting; and the minimum retreatment interval is 14 days.

**GRAIN STORAGE (GRAIN ELEVATORS/SILOS)**

**BEFORE STORING GRAINS (CORN, BARLEY, OATS, RYE, WHEAT) (REI 12):** Before applying spray, clean elevators, thoroughly. Remove and burn all sweepings and debris. For a residual wall, floor and machinery spray in grain elevators before loading grain, make a thorough application to walls, floors and ceilings. Spray all surfaces to the point of runoff, making sure the spray is driven into joints, cracks and crevices where insects may be concealed. Mix 5.0 lb active ingredient (8 pt formulated product) in 25 gal of water. Maximum application rate is 0.4762 lb ai (12 fl oz formulated product) per 1,000 sq ft. Maximum number of applications per year is 1 per storage period.

### OUTDOOR ORNAMENTALS

#### ORNAMENTAL HERBACEOUS PLANTS, SHADE TREES, ORNAMENTAL WOODY SHRUBS AND VINES (REI 12):

Injury may occur on Ferns, Hickory, Viburnum, Lantana, Crassula and Canaerti Juniper following the use of Malathion 5 EC, slight injury has also been reported on Boston, Pteris, and Maidenhair Ferns, Petunias, Small-Leaf Spirea, White Pine and Maples. Under extreme heat, drought and disease conditions the emulsifiable concentrates may cause slight damage to Elms.

The maximum single application rate is 2.5 lb ai (64 oz of formulated product) per 100 gal. The maximum number of applications per year is 2. The minimum retreatment interval is 10 days.

**Aphids, Spider mites:** 1.5 pt per 100 gal.

**Bagworms, Birch leaf miner, Boxwood leaf miner:** 2 pt per 100 gal.

**European pine shoot moth, Four-lined leaf bug, Japanese beetle adult, Potato leafhopper, Rose leafhopper, Tarnished plant bug,**  
**Thrips:** 1.5 pt per 100 gal.

**Lacebug:** 1 pt per 100 gal.

**Mealybugs, Whiteflies:** 1.5 pt per 100 gal.

**Oak Kermes:** 2 pt per 100 gal. Apply when scale crawlers have settled on foliage.

**Tent caterpillar:** 2 pt per 100 gal.

**Oystershell scale:** 1 pt per 100 gal. Apply when scale crawlers have settled on foliage.

**Euonymus scale, Scurfy scale:** 1.5 pt per 100 gal.

**Azalea scale, Magnolia scale, Pineleaf scale:** 2 pt per 100 gal.

**Fletcher scale:** 2 pt per 100 gal. Apply when scale crawlers have settled on foliage.

**Florida red scale, Juniper scale:** 2 pt per 100 gal. Apply when scale crawlers have settled on foliage.

**Black scale crawlers, Soft brown scale:** 2.25 pt per 100 gal.

**Monterey pine scale:** 2.5 pt per 100 gal.

**Pine needle scale:** 4 pt per 100 gal.

**Wax scale:** 4 pt per 100 gal.

**OUTDOOR GARDENS (spot treatment only)**

**(CUCUMBERS, EGGPLANT, ENDIVE, HEAD LETTUCE, LEAF LETTUCE, ONIONS, PEPPERS, TOMATO, ORNAMENTAL HERBACEOUS PLANTS, ORNAMENTAL NON-FLOWERING PLANTS, ORNAMENTAL WOODY SHRUBS AND VINES)**

Millipedes, Sowbugs, Springtails - 1 teaspoon per gal. Apply to 150 sq ft of soil surface or where insects congregate. The maximum number of applications per year is 2. The minimum retreatment interval is 10 days.

**LAWNS (SPOT TREATMENT ONLY)**

**Ant mounds:** Do not Use for Fire Ants, Harvester Ants, Pharaoh Ants or Carpenter Ants - 1.5 pt per 100 gal. Spray ant hills thoroughly so that they are well soaked. For other small ants in flower beds, lawns, around trees, spray lightly in the infested areas. Repeat in 10 to 15 days if ants return.

**Ground pearls (SPOT TREATMENT ONLY):** - 1.5 pt per 100 gal. Make full coverage to soil surface when ground pearl nymphs are in the pink, "crawler" or active stage and immediately wash into soil with additional water.

**CULL DUMPS**

**Drosophila flies, Dried fruit beetles:** Apply as a drench using 6.857 lb ai (10.75 pt formulated product) in 80 to 100 gal of spray per 1,000 sq ft Do not use on dumps over 18 inches deep.

**DO NOT FEED TREATED FRUIT AND VEGETABLES.**

**Warranty and Disclaimer Statement**

The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Such risks may arise from weather conditions, soil factors, off-target movement, unconventional farming techniques, the presence of other materials, the manner of use or application, or other unknown factors, all of which are beyond the control of Arysta LifeScience North America, LLC ("Arysta"), and can cause crop injury, injury to non-target crops or plants, ineffectiveness of the product, or other unintended consequences. All such risks shall be assumed by the user or buyer. Arysta 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, subject to the inherent risks described above, when used in accordance with the Directions for Use under normal conditions. This warranty does not extend to the use of this product contrary to label instructions or under conditions not reasonably foreseeable to Arysta, and is subject to the inherent risks described above.

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA DISCLAIMS ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ARYSTA, MANUFACTURER, AND SELLER DISCLAIM AND SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE, HANDLING, APPLICATION, STORAGE, OR DISPOSAL OF THIS PRODUCT OR FOR DAMAGES IN THE NATURE OF PENALTIES, AND THE USER AND BUYER WAIVE ANY RIGHT THAT THEY MAY HAVE TO SUCH DAMAGES. NO AGENT, REPRESENTATIVE OR EMPLOYEE OF ARYSTA IS AUTHORIZED TO MAKE ANY WARRANTY, GUARANTEE OR REPRESENTATION BEYOND THOSE CONTAINED HEREIN OR TO MODIFY THE WARRANTIES CONTAINED HEREIN.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE TOTAL LIABILITY OF ARYSTA, MANUFACTURER, AND SELLER, SHALL BE LIMITED TO THE PURCHASE PRICE PAID, OR AT ARYSTA'S ELECTION, THE REPLACEMENT OF THE PRODUCT.**

MALATHION 5 EC (PENDING) RED RESUBMISSION 02/02/11, RESUBMISSION 08/29/11, RESUBMISSION 05/08/12 RESUBMITTED 08/07/12 RESUBMITTED 081412