

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

September 1, 2005

Ms. Jean Butler  
Micro Flo Company, LLC  
P.O. Box 772099  
Memphis, TN 38117-2099

Dear Ms. Butler:

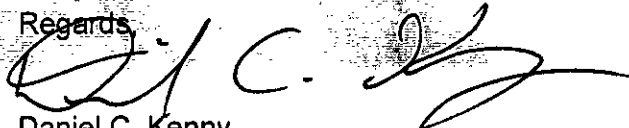
Subject: Revised Labeling for EPA Reg. No. 51036-110  
Dimethoate 4E  
Use Deletions of Dimethoate as Requested by the Agency  
Your Submission Dated March 1, 2005

The label for the product referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided you make the following changes to the label:

1. Under Field Crops, delete the word "birdsfoot". Birdsfoot trefoil is not an allowable use.
2. Delete the section "Non-Cropland Adjacent to Vineyards." This use site is vague and may include residential areas.
3. The Agency recommends that the Storage and Disposal statements be moved immediately after the last Directions for Use statement and before the Warranty Disclaimer.
4. For your information, the restriction on the use of dimethoate in shade houses has been re-examined by the Agency. At your option, on the final printed label, you may delete "shade houses" from the following prohibition statement currently required on all dimethoate labels: "Do not use on ornamental plants growing in greenhouses, shade houses, Christmas tree and conifer plantations, landscapes, interiorscapes and residential, public, recreational, commercial, industrial and institutional establishments". However, please note there is no guarantee that shade houses will remain a supported use site upon reregistration.

A stamped copy of the label is enclosed for your records. Submit two copies of your final printed labeling before you release the product for shipment. If you have any questions, please contact Ann Hanger at (703) 306-0395 or [hanger.ann@epa.gov](mailto:hanger.ann@epa.gov).

Regards,

  
Daniel C. Kenny  
Product Manager 1  
Insecticide/Rodenticide Branch  
Registration Division (7505C)

Enclosure (1)

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ACCEPTED  
with COMMENTS  
In EPA Letter Dated:

SEP 1 2005.

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
51036-110

DIMETHOATE 4E  
SYSTEMIC INSECTICIDE  
ORGANOPHOSPHATE

ACTIVE INGREDIENT: Dimethoate (0,0-dimethyl S-(N-methyl- phosphorodithioate) .....	carbamoylmethyl) .....	43.5%
INERT INGREDIENTS:.....		56.5%
	TOTAL.....	100.0%

1 gallon contains 4 pounds of dimethoate

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.)

FIRST AID Organophosphate	
<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 person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</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 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 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>

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<b>HOT LINE</b>
<b>EMERGENCY TELEPHONE NUMBERS:</b> Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact:
<ul style="list-style-type: none"><li>• (800) 424-9300 .. CHEMTREC (transportation and spills)</li><li>• (800) 832-HELP (4357) Human health)</li><li>• (800) 345-4735 ASPCA (animal health)</li></ul>
This product is an organophosphorus ester that inhibits cholinesterase. <b>NOTE TO PHYSICIAN:</b> This product may cause cholinesterase inhibition. Antidote is atropine.

See Additional Precautionary Statements Inside

EPA Reg. No. 51036-110  
AD 101204

EPA Est. No. 51036-GA-1

Manufactured By:  
MICRO FLO COMPANY LLC  
P.O. BOX 772099  
MEMPHIS, TN 38117

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

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**PRECAUTIONARY STATEMENTS**  
**Hazards To Humans And Domestic Animals**

**WARNING**

May be fatal if swallowed. May cause eye injury. Harmful if absorbed through skin. May cause irritation of the nose and throat. Do not get into eyes. Avoid breathing the vapor or spray mist.

Keep away from domestic animals and foodstuffs. Do not contaminate or apply onto feed or foodstuffs.

**PERSONAL PROTECTIVE EQUIPMENT**

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves, such as barrier laminate or viton
3. Shoes plus socks
4. Protective eyewear
5. Chemical-resistant headgear for overhead exposure

Mixers and loaders must wear:

1. Long-sleeved shirt and long pants
2. Chemical-resistant gloves, such as barrier laminate or viton
3. Shoes plus socks
4. Protective eyewear
5. Chemical-resistant headgear
6. For exposure in enclosed areas, use a respirator with either an organic vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter. For outdoor exposure, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C), or a NIOSH approved respirator with any R, P or HE filter.

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 and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**Engineering Controls:**

Human flaggers must be in enclosed cabs. When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS**

Users should:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
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.

**ENVIRONMENTAL STATEMENTS**

This product is toxic to wildlife and aquatic invertebrates. For terrestrial use, do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

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

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or flame.

**DIRECTIONS FOR USE**

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

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

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### 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 greenhouses, 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), notification to workers, 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 (REI) of 48 hours.

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. Chemical-resistant gloves, such as barrier laminate or viton
3. Shoes plus socks
4. Protective eyewear
5. Chemical-resistant headgear for overhead exposure

### 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.

**STORAGE:** Do not store below temperature of 32 degrees F., as it may tend to crystallize. Avoid storage above 90 degrees F., as prolonged storage above 90 degrees F. may cause some loss in grade. Store in safe manner. Store in original container only. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.

**PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## DIRECTIONS FOR APPLICATION

### ORNAMENTAL PLANTS GROWN IN NURSERIES ONLY

Do not use on ornamental plants grown in greenhouses, shade houses, Christmas tree and conifer plantations, landscapes, interiorscapes and residential, public, recreational, commercial, industrial and institutional establishments.

This product is intended for use by the commercial grower or commercial applicator in conventional hydraulic sprayers, ground applicators, airplane sprayers, or by chemigation.

Do not apply when weather conditions favor drift of spray from areas treated. Repeat applications as necessary unless otherwise specified. Consult your state experiment station or state extension service for proper timing of applications.

Dimethoate 4E has systemic and contact activity against a broad spectrum of piercing, sucking and chewing insects; however, it may not control certain organophosphate resistant species.

For proper mixing, spray tank should be at least three-quarters filled with water before adding Dimethoate 4E. Mechanical agitation or re-circulation through pump bypass to tank is usually sufficient for maintaining a good dispersion.

Spray tank mixtures of Dimethoate 4E with alkaline insecticides and fungicides should be applied promptly. Consult the tank-mix product label for appropriate application rates and use instructions. Follow the label directions for the most restrictive of label precautions and limitations. This product should not be tank-mixed with any product, which prohibits such mixing. Tank mixtures are permitted only in those states where the tank mix partner is registered. Add other products in the following order: water-soluble bags, wettable powders, dry flowables, liquid flowables, ECs, and soluble materials such as fertilizers. If tank mixing with soluble fertilizers containing nitrogen or boron, allow water-soluble bags to dissolve first.

**AERIAL APPLICATION:** Apply at least one gallon of finished spray per acre. Apply at least 5 gallons finished spray per acre in California.

**AUTOMATIC FLAGGING DEVICES SHOULD BE USED WHENEVER FEASIBLE.**

**IF HUMAN FLAGGERS ARE EMPLOYED THEY MUST WEAR THE PROTECTIVE CLOTHING AND RESPIRATOR SPECIFIED ON THIS LABEL.**

**GROUND APPLICATION:** Use water for dilution and apply at least 5 gallons of finished spray per acre.

Do not use on crops grown in greenhouses.

When insect pest population is high, use the higher label rate.

NOTE: Pre-Harvest Interval days indicated in ( ) after each use.

## GENERAL CHEMIGATION INSTRUCTIONS

Apply this product only through one or more of the following types of systems: 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 system(s). Do not apply this product through any other type of irrigation system.

Crop injury or lack of effectiveness can result from non-uniform 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 (including greenhouse systems) 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.

A. Center Pivot, Traveler, Big Gun, Motorized Lateral Move, End Tow, and Side (Wheel) Roll Irrigation Equipment: Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank or injection equipment with water. Operate system for one complete circle for center pivot or one complete run for the other recommended equipment, measuring time required, amount of water injected, and acreage contained in circle or run. Mix recommended amount of product for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run, but continue to operate irrigation system until the product has been cleared from last sprinkler head. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur.

B. Solid Set and Hand Move Irrigation Equipment: Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of product for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that the product will remain in suspension during the injection cycle. This product can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until pesticide is cleared from last sprinkler head.

C. Flood (Basin), Furrow and Border Chemigation (Soil Drench Uses): Operate system and injection equipment at normal pressures recommended by the manufacturer of



injection equipment used. Fill tank or injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of product for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that the product will remain in suspension during the injection cycle. This product can be injected at the beginning or end of the irrigation cycle or as a separate application. 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 requirements listed in the section titled "Safety Devices" below.

D. Drip (Trickle) Chemigation (Soil Drench Uses): Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank or injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of product for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that the product will remain in suspension during the injection cycle. This product can be injected at the beginning or end of the irrigation cycle or as a separate application. Systems must meet the requirements listed in the section titled "Safety Devices" below.

### SAFETY DEVICES

(1) The systems designated above 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. (2) All pesticide injection pipelines must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. (3) 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. (4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. (5) 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. (6) 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. (7) Do not apply when wind speed favors drift beyond the area intended for treatment.

## SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Public water systems 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 outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. 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.

## FRUIT

CHERRIES, Preharvest (Idaho, Oregon, Utah, Washington, and Montana only): (21)

Aphids, Cherry Fruit Flies, Mites - Dilute Application: Use 1/2 to 1 pt./100 gals. water. Concentrate Application: Use 2 to 4 pints per acre. Apply a minimum spray volume of 50 gallons per acre. Make a single application within 7 days of adult fly emergence in the area. This single application should be made in late May or early June when the fruit are small in size.

NOTE: Concentrate sprays should be used with caution to avoid fruit marking and injury on sensitive varieties (such as Rainier species). Do not apply when trees or substantial numbers of weeds in the treatment area are in bloom. Do not graze livestock in treated orchards. Only a single application may be made.

CHERRIES, Postharvest (Idaho, Oregon, Utah, Washington, and Montana only):

Aphids, Cherry Fruit Flies, Mites - Dilute Application: Use 1/2 to 1 pt./100 gals. water. Concentrate Application: Use 2 to 4 pints per acre. Apply a minimum spray volume of 50 gallons per acre. Make a single application a minimum of 7 days after final harvest or apply in cases where a decision is made not to harvest due to poor fruit quality, a light crop, or unfavorable market conditions.

Do not apply when trees or substantial numbers of weeds in the treatment area are in bloom. Do not graze livestock in treated orchards. Only a single application may be made.

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GRAPEFRUIT, KUMQUATS, LEMONS, LIMES, ORANGES, PUMMELOS, TANGELOS, TANGERINES: (15 or 45)

Aphids, Mites (except rust mites), Thrips, Whiteflies -

Ground Equipment: 1/2 to 1 pt./100 gals. water for dilute application. Apply as a thorough distribution coverage spray.

For concentrate (mist) application, apply 1 to 2 quarts per acre in sufficient water to provide full coverage of foliage.

Aircraft equipment: 1 to 2 qts./acre in 5 to 10 gals. water.

Use higher rate if pest pressure is heavy or if orchard foliage is dense.

Scales (except black or snow) -

Ground Equipment: 1/2 to 1 1/2 pt./100 gals. water for dilute application. Apply as a thorough distribution coverage spray.

For concentrate (mist) application, apply 1 to 2 quarts per acre in sufficient water to provide full coverage of foliage.

Aircraft equipment: 1 to 2 qts./acre in 5 to 10 gals. water.

Use higher rate if pest pressure is heavy or if orchard foliage is dense.

NOTE: When using high rate for scale control, Pre-Harvest Interval is 45 days.

Do not apply when trees or substantial numbers of weeds in the orchard are in bloom.

Do not use on citrus seedlings.

Make no more than 2 applications to mature fruit.

Do not graze livestock in treated orchards.

CITRUS (California & Arizona: Nonbearing and nursery stock):

Aphids, Thrips - Foliar Spray: 1 pt./100 gals. water. Repeat applications as necessary.

May be applied in the year trees begin to bear fruit. Soil Drench (trees 1 to 3 years old): 2 qts./acre. Apply in the furrow or basin around the base of the tree. Apply when insect injury to new growth appears. Do not apply to trees that will bear fruit within one year.

CITRUS, GRAPEFRUIT, LEMONS, ORANGES, TANGERINES (Arizona Only) Thrips - use specified dosage in the amount of water necessary to achieve adequate coverage of foliage. The type of equipment used will determine the concentration required.

Aerial: Apply up to 2 quarts (2 lbs. a.i.) in not less than 5 gals. water/acre. Ground:

Apply up to 2 quarts (2 lbs. a.i.) in not less than 20 gals. water/acre. Do not apply within 15 days of harvest. Do not enter treated groves within 4 days of last application.

Use of dimethoate is prohibited during any time of day in any given orchard from when that orchard has 10% open blooms until such time that there has been at least 75% petal fall on the north side of the trees. Applications of dimethoate shall be limited to

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that period of time between one (1) hour after sunset to three (3) hours before sunrise when only any one of the conditions prevail: 1) before the onset of petal fall, the orchard to be treated has open blooms present and those open blooms represent less than 10% of the total anticipated blooms in the orchard. 2) After the initiation of petal fall there are less than 25% of open blooms remaining in the orchard to be treated. 3) It is between the calendar dates of February 15 and May 1<sup>st</sup>.

All applications of dimethoate citrus must be documented on Form 1080 written either by a pest control advisor, farm owner or farm manager as is normally required for custom applications of pesticides, except that private applicators may omit the "Pesticide Application Report" section. The description of the status of bloom of the orchard to be treated as it was at the time of application shall be indicated in the section for "Label Restrictions/Special Instruction". Both private and custom applicators shall mail the to the Agriculture Department's Phoenix office the original of each completed Form 1080 done in accordance with this label. Each form 1080 shall be postmarked not later than Monday following the week in which the application was made, except when holidays intervene.

#### PEARS: (28)

Aphids, leafhoppers, pear psylla, mites (except rust mites) - Ground Equipment: 1/2 to 1 pt./100 gals. water for dilute application. Apply as a thorough distribution coverage spray.

For concentrate (mist) application, apply 1 to 2 quarts per acre in sufficient water to provide full coverage of foliage.

Aircraft equipment: 1 to 2 qts./acre in 5 to 10 gals. water.

Use higher rate if pest pressure is heavy or if orchard foliage is dense.

Do not apply when trees or substantial numbers of weeds in the orchard are in bloom.

Do not graze livestock in treated orchards.

#### NUTS

##### PECANS: (21)

Aphids, mites, leafhoppers - Ground Equipment: 2/3 pt./acre.

Aerial Equipment: 2/3 pt./acre in a minimum of 5 gals. of finished spray.

Do not graze livestock in treated groves.

#### VEGETABLE CROPS

##### ASPARAGUS (EXCEPT ARIZONA AND CALIFORNIA): (180)

Aphids, Asparagus beetles - 1 pt./acre. Apply after the last harvest at no less than 7 day intervals up to a maximum of 5 pt. per acre per year.

##### BEANS (GREEN, LIMA, SNAP, DRY): (2)

Aphids, grasshoppers, leafhoppers, leaf miners, lygus bugs, mites,

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bean leaf beetle, Mexican bean beetle - 1/2 to 1 pt./acre.

Do not feed treated vines.

This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom.

**BROCCOLI, CAULIFLOWER,:** (7)

Aphids - 1/2 to 1 pt./acre.

**BRUSSELS SPROUTS (FOR USE IN CALIFORNIA ONLY):** (10)

Aphids- 1 to 2 pt./acre in a minimum of 100 gallons of water using ground equipment. Apply when insects first appear and repeat as needed. Do not feed or graze livestock in treated fields. Do not apply by air. Do not exceed six applications per growing season.

**CELERY:** (7)

Leaf miners, Carmine mite, Two-spotted spider mite - 1 pt./acre.

**GARBANZO BEANS:** (2)

Aphids, Grasshoppers, Leafhoppers, Leafminers, Lygus bugs, Mites - 1/2 to 1 pt./acre. Do not feed treated vines to livestock. This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom.

**LEAF LETTUCE, KALE, TURNIP (GREENS AND ROOTS), MUSTARD GREENS, SWISS CHARD, ENDIVE (ESCAROLE):** (14)

Aphids, leafhoppers, leaf miners - 1/2 pt./acre.

**MELONS (EXCEPT WATERMELONS):** (3)

Aphids, leafhoppers, leaf miners, thrips - 1 pt./acre.

**WATERMELONS:** (3)

Aphids, leaf miners, leafhoppers - 1/2 to 1 pt./acre.

**LUPINE:** (2)

Aphids, Lygus bugs, leafhoppers, leafminers - 1/2 to 1 pt/acre. Apply when insects first appear.

Make only 2 applications per season.

Do not feed or graze forage or hay.

This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom.

**PEAS:** (2)

Aphids - 1/3 to 1 pt./acre.

Lygus Bugs - 1 pt./acre.

Do not make more than one application per season.

Do not feed or graze hay within 21 days after last application when stationary viner is

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used. Do not feed or graze when a mobile viner is used.

This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom.

LENTILS: (14) - Aphids - 1/3 to 1 pt./acre.

Lygus Bugs - 1 pt./acre

Do not make more than 2 applications per season.

Do not feed or graze treated plants.

This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom.

PEPPERS: (2)

Aphids, leaf miners, maggots - 1/2 to 2/3 pt./acre.

POTATOES: (2)

Aphids, grasshoppers, leaf miners, leafhoppers - 1/2 to 1 pt./acre.

TOMATOES: (7)

Aphids, leaf miners, leafhoppers - 1/2 to 1 pt./acre. Where cabbage worms and cabbage loopers are a problem, the above rates of Dimethoate 4E are compatible with Endosulfan or Malathion. Use in accordance with the manufacturers' directions for control of these insects.

### FIELD CROPS

ALFALFA, ~~BIRDSFOOT~~ SAINFOIN: (10)

Aphids, grasshoppers, leafhoppers, lygus bugs, plant bugs, reduction of alfalfa weevil larvae - 1/2 to 1 pt./acre.

This pesticide is highly toxic to bees; do not apply if bees are visiting the areas to be treated when crop or weeds are in bloom.

Do not apply within 10 days of pasturing.

Make only one application per cutting. Effective only on cutting to which applied.

FIELD CORN: (14)

Banks grass mites (excluding Trans-Pecos area of Texas), aphids, bean beetle, corn rootworm adult, mites (including two-spotted spider mite), thrips, fleahoppers - 2/3 to 1 pt./acre.

Grasshoppers - 1 pt./acre.

Ground Application: Apply above rate in 20 to 40 gals. of water per acre.

Aerial Application: Apply above rate in 1 or more gals. of water per acre.

Apply as necessary.

Make no more than three applications per year.

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Do not feed or graze within 14 days of last application.  
Do not apply to corn during the pollen shed period.

**COTTON: (14)**

Aphids, mites, thrips, fleahoppers, plant bugs -  
1/4 to 1/2 pt./acre.

Lygus bugs - 1/2 pt./acre. Repeat applications should not be made at intervals closer than 14 days. Do not feed treated forage or graze livestock on treated fields.

Note: Pre-Harvest Interval is 40 days if once refined vegetable oil is used for dilution.

Make only 2 applications per season at the higher rate.

Apply at least one quart of finished spray/acre.

**COTTON (GROWN IN CALIFORNIA AND ARIZONA): (14)**

Lygus bugs, leafhoppers, black fleahoppers, thrips, plant bugs - 1/2 to 1 pt./acre. Repeat applications should not be made at intervals closer than 14 days.

Make only 2 applications per season at the higher rate.

Do not feed treated forage or graze livestock on treated fields.

**SAFFLOWER (GROWN IN CALIFORNIA AND ARIZONA): (14)**

Aphids, leafhoppers, Lygus bugs, thrips, plant bugs - 1/2 to 1 pt./acre. Repeat applications should not be made at intervals closer than 14 days.

Make only 2 applications per season at the higher rate.

**SORGHUM (MILO): (28)**

Aphids, mites (including spider mites) - 1/2 to 1 pt./acre.

Banks grass mites (excluding Trans-Pecos area of Texas) - 1 pt./acre.

Grasshoppers - 1 pt./acre.

Sorghum midge - 1/4 to 1/2 pt./acre.

Aerial application: Apply above rates in 1 or more gals. of water per acre.

Do not feed or graze within 28 days of last application.

Make no more than 3 applications as needed per season.

Do not apply after heading.

**SOYBEANS: (21)**

Mexican bean beetle, spider mites, bean leaf beetle, leafhoppers, alfalfa loopers, three cornered alfalfa hopper - 1 pt./acre. Grasshoppers - 1 pt./acre.

Aphids - 1 pt./acre.

Ground application: Apply above rate in 25 to 40 gals. of water per acre.

Aerial Application: Apply above rate in 1 or more gals. of water per acre.

Do not feed or graze within 5 days of last application.

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**WHEAT, TRITICALE: (35)**

Note: Pre-Harvest Interval for California is 60 days.

Aphids (greenbugs), Wheat midge - 1/2 to 3/4 pt./acre.

Brown wheat mite - 1/3 to 1/2 pt./acre.

Grasshoppers - 3/4 pt./acre. Do not apply within 14 days of grazing immature plant.

Make no more than 2 applications per season.

**SEED CROPS**

**ALFALFA: (10)**

Aphids, leafhoppers, lygus bugs, grasshoppers, reduction of alfalfa weevil larvae - 1/2 to 1 pt./acre.

Do not apply if the crop or weeds in the treatment area are in bloom.

Do not feed or graze livestock in treated crops, hay, threshings or stubble within 10 days of application.

**GRASSES GROWN FOR SEED (Idaho, Oregon and Washington only): (14)**

Winter Grain Mites, Aphids, Thrips and Plant Bugs - 1/2 to 2/3 pt. per acre. May be applied through ground or aerial application equipment. Apply in minimum of 2 gallons of water per acre. Do not graze or use seed or seed screenings for feed purposes.

**ATTENTION: DO NOT USE ON SEED ONIONS, SEED CARROTS, OR SEED BERMUDA GRASS.**

**FORESTRY/ORNAMENTAL TREE USES**

**COTTONWOOD (POPLAR) TREES:**

Leaf Beetle, Aphids, Bagworms – (Foliar spray) – Apply 2 oz per 6 gallons of water. Repeat on a 10 day interval, as necessary, up to 4 sprays per year. (Soil Injection) – Apply as a soil injection at the rate of .08 oz per inch of tree circumference measured approximately 5 feet above ground level. Application should be made shortly after trees leaf out and again 6 to 8 weeks later, if necessary. Inject to a 4 to 6 inch level below ground surface. Number of injections should equal inches of tree circumference. Water heavily with at least two inches of water.

Leaf Beetle (Chemigation) – 1 1/3 to 4 pints per acre through drip line. Application may be repeated two times. Refer to section titled "Drip (Trickle) Chemigation (Soil Drench Uses)" for additional application information.

**IMPORTANT:** When making soil injections, use a low pressure soil injection device. Always wear a full face shield, rubber gloves, long-sleeved shirt and rubber apron. **DO NOT** inject into soil areas where children or pets may dig or exhume treated soil.



**SPRUCE AND LARCH TREE SEED ORCHARDS:**

Spruce Budworm, Cone Maggot, Cone Midge, Seed Chalcid, Spruce Coneworm, Spruce Seed Moth, Spiral Spruce Cone Maggot, Spruce Cone-Axis Midge – Apply a 0.5 – 1.0% solution or 10-15 fl. oz per acre. Apply after pollination but before cones become pendent to control cone and seed insects. To be applied with pump type sprayer to point of runoff.

~~NON-CROPLAND ADJACENT TO VINEYARDS  
NAPA, SONOMA, MENDOCINO AND LAKE COUNTIES IN CALIFORNIA~~

~~To control leafhoppers on natural growth on non-cropland adjacent to vineyards apply up to 2 quarts of formulated product per acre. Do not use in less than 50 gallons of water per acre. Apply by ground rig or handgun. Apply up to two applications per year based on monitoring through use of yellow-sticky traps.~~

**OUTDOOR ORNAMENTAL PLANTS  
(GROUND APPLICATION ONLY)**

Dimethoate 4E is generally effective in controlling aphids, thrips, leaf miners, scales, leafhoppers and mites. Make adequate spray when pests appear or when damage is first observed. Do not overdose or overspray. For proper timing of treatments for the control of specific pests on ornamental plants, consult your state agricultural experiment station or state agricultural extension service.

Do not use on ornamental plants not listed. Do not use on any ornamental stock plants grown as a source of propagation material, such as cuttings, layers, root stocks or scions for grafting or budding. Do not use in spray mixtures containing oil. Do not use on plants growing in greenhouses.

For ornamental shade and nursery trees (including, but not limited to, those trees listed otherwise in the following directions) to control aphids and elm leaf beetle, apply as a soil injection at the rate of 1/2 teaspoonful of product per inch of tree circumference measured at approximately 4 1/2 to 5 feet above ground level. Apply using a low-pressure injector to a 4 to 6 inch level below ground surface within the dripline of the tree. Water heavily after application. Application should be made once per growing season (twice per season for elm leaf beetles; once shortly after trees leaf out, and once 6 to 8 weeks later).

Some species such as River Birch, Prunus, Ornamental Cherry, Hawthorne, Japanese Lace Maple and Aspens may show phytotoxic effects at label rates. **DO NOT USE ON BEARING FRUIT TREES.**

**IMPORTANT:** When making soil injections, use a low pressure soil injection device. Always wear a full face shield, rubber gloves, long-sleeved shirt and rubber apron. **DO NOT** inject into soil areas where children or pets may dig or exhume treated soil.

**ARBORVITAE:**

Aphids, Bagworm, Mites - 2 Teaspoonfuls per gallon of water (3 1/2 fl.oz. per 10 gals. water).

**AZALEAS:**

Lace Bugs, Leaf Miners, Mites, Tea Scale and White Flies - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water).

**BIRCH:**

Aphids and Leafminers - 1/2 to 1 Teaspoonful per gallon of water (5/6 to 1 3/4 fl.oz. per 10 gals. water). For leafminers, apply when leaves are expanded and repeat in 6 weeks.

**BOXWOOD:**

Leafminers, Mealy Bugs and Mites - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water). For leafminers, apply in spring when leaf miner flies first appear or in early summer for control of larvae.

**CAMELLIAS:**

Aphids, Camellia Scale and Tea Scale, Mites - Foliar Spray: 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water). Soil Drench: 2 fl.oz. in 1 gal. water. For plants up to 6' tall. Increase rate proportionately for larger plants. Apply as a soil drench around the base of plants in early spring.

**CARNATIONS:**

Aphids, Thrips and Mites - Soil Drench: 2 fl.oz. per 500 sq.ft. of bed or bench. Apply in sufficient water for even distribution. Water in thoroughly following application.

**CEDAR:**

Mites - 2 Teaspoonfuls per gallon of water (3 1/2 fl.oz. per 10 gals. water).

**CHRISTMAS TREES:**

Balsam Twig Aphid, Blue Aphid, Bagworms, European Pine Shoot Moth, Mites, Nantucket Pine Tip Moth, Zimmerman Pine Moths - 3 Teaspoonfuls per gallon of water (5 1/4 fl.oz. per 10 gals. water). NOTE: DO NOT USE ON JAPANESE MAPLES OR RED LEAF ORNAMENTAL SPP.

**CYPRESS:**

Bactra Moth Larvae - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water). Apply as a drenching spray.

**DAYLILLIES:**

Aphids, Thrips - 2 Teaspoonfuls per gallon of water (3 1/2 fl.oz. per 10 gals. water).

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**DOUGLAS FIR:**

Fir Cone Midge - 4 Teaspoonfuls per gallon of water (7 fl.oz. in 10 gals. water). Make thorough coverage application when cones are closed and pendant. Use hydraulic or backpack sprayer.

**FRASER FIR:**

Rosette Bud Mite - 1 to 2 Teaspoonfuls per gallon of water (1 1/3 pints per 100 gallons of water). Use a high pressure hydraulic sprayer with a handheld spray gun to thoroughly wet trunk and limbs on front and back of tree.

**EUONYMUS:**

Aphids and Scales - 1 to 2 Teaspoonfuls per gallon of water (1 3/4 to 3 1/2 fl.oz. per 10 gals. water).

**FICUS NITIDA:**

Thrips - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water).

**GARDENIAS:**

Tea Scale and Whitefly - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water).

**GERBERAS:**

Thrips - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water).

**GLADIOLUS:**

Aphids and Thrips - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water).

**HACKBERRY:**

Hackberry Nipplegall Psyllid, Hackberry Budgall Pysllid - Soil Injection: Use a 1:3 dilution (1 part Dimethoate 4E to 3 parts water). Apply using a low-pressure injector. Inject 1 fl.oz. of dilution 6 inches below ground for each 1/2 inch of trunk diameter. Make insertions within dripline of tree. Apply prior to bud break. Do not apply to plants that have not been established for at least 3 years.

**HEMLOCKS:**

Mites and Scales - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water).

**HOLLY (English & American, not Burford variety):**

Leafminers, Mites and Soft Scale - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water). For leafminers, apply in spring when leafminer flies first appear, or in early summer, for control of larvae in infested leaves.

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#### HONEYSUCKLE:

Honeysuckle Aphid - Soil Injection: Use a 1:3 dilution (1 part Dimethoate 4E to 3 parts water). Apply using a low-pressure injector. Inject 1 1/4 fl.oz. of dilution 6 inches below ground for each 1/2 inch of trunk diameter. Do not apply to plants that have not been established for at least 3 years.

#### IRIS:

Aphids, Iris Borer, Thrips - 2 Teaspoonsful per gallon of water (3 1/2 fl.oz. per 10 gals. water). For borer control, spray when new leaves are 5 to 6 inches tall.

#### OAK:

Golden Oak Scale - 2 Teaspoonsful per gallon of water (3 1/2 fl.oz. per 10 gals. water).

#### PINES, JUNIPER:

Mites, Aphids, Bagworms, European Pine Shoot Moth, Zimmerman Pine Moth, Midges - 2 Teaspoonfuls per gallon of water (3 1/2 fl.oz. per 10 gals. water). Nantucket Pine Tip Moth and Loblolly Pine Sawfly - 3 1/2 Teaspoonsful per gallon of water (6 fl.oz. per 10 gals. water).

#### PINYON PINE:

Pinyon Needle Scale - 2 1/2 Tablespoons per gallon of water (12 1/2 fl.oz. in 10 gals. water). Apply spray to egg masses at the base of the trees and to all rough bark and crotches that can be reached from the ground. Make this bark application when crawlers start to emerge from the eggs. Use hydraulic or backpack sprayer. Do not spray leaves or needles since phytotoxicity may result.

Pinyon "Pitch Mass" Borer, Pinyon Spindle Gall Midge, Tip Moth - Soil Injection: Use a 1:3 dilution (1 part Dimethoate 4E to 3 parts water). Apply using a low-pressure injector. Inject 1 1/2 fl.oz. of dilution 6 inches below ground surface for each 1 inch of trunk diameter. Make insertions within dripline of tree. For Spindle Gall Midge and Tip Moth apply in mid to late spring. For Pinyon Borer make application in early summer.

#### POINSETTIA:

Mites, Whitefly, Mealybug and Aphids - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water).

#### ROSES:

Leafhoppers, Thrips, Aphids, Mites - 1 Teaspoonful per gallon of water (1 3/4 fl.oz. per 10 gals. water).

Foliar spray: Apply 2 sprays 6 weeks apart the first year followed by annual applications soon after the first growth begins in the Spring.

Soil Drench: Apply as a soil drench around the base of plants in early spring at the rate of 2 Tablespoons (1 fl.oz.) per gallon of water per plant.

TAXUS (upright or spreading Yew):

Fletcher Scale, Mealybug and Mites - 2 Teaspoonsful per gallon of water (3 1/2 fl.oz. per 10 gals. water).

#### CONDITIONS OF SALE AND WARRANTY

The Directions For Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of MICRO FLO COMPANY LLC ("Micro Flo") or the Seller. All such risks shall be assumed by the Buyer. Micro Flo warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use, subject to the inherent risks, referred to above. MICRO FLO MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL MICRO FLO OR THE SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. Micro Flo and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing Conditions of Sale and Warranty which may be varied only by agreement in writing signed by a duly authorized representative of Micro Flo.