19713-231 09/01/2005 1/9

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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

September 1, 2005

Ms. Luz Chan
Drexel Chemical Company
P.O. Box 13327
Memphis, TN 38113-0327

Dear Ms. Chan:

Subject: Revised Labeling for EPA Reg. No. 19713-231
Drexel Dimethoate 4EC
Use Deletions of Dimethoate as Requested by the Agency
Your Submission Dated November 18, 2004

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 "Fruit Crops", delete "Apples" from the second row entitled "NON-BEARING: Apples, Pears" and in the last row of the table under the pears section entitled "SPECIFIC DIRECTIONS"

2. Under the section entitled "ORNAMENTAL PLANTS GROWN IN OUTDOOR NURSERIES ONLY":

   a. Modify the first statement to read as follows, "Do not use on ornamental plants growing in greenhouses, Christmas tree and conifer plantations, landscapes, interiorscapes and residential, public, recreational, commercial, industrial and institutional establishments."

   b. For your information, the restriction on the use of dimethoate in shade houses has been re-examined by the Agency. Therefore, "shade houses" is no longer required in the statement above. However, please note there is no guarantee that shade houses will remain a supported use site upon reregistration.

c. In the statement beginning with, "For ornamental shade and nursery trees..." delete the parenthetical statement, "(including, but not limited to, those trees listed otherwise in the following directions)."

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.

Regards,

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

Enclosure (1)

Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 19713-231

Drexel

Dimethoate 4EC

Systemic Insecticide - Miticide

ACTIVE INGREDIENT:	
Dimethoate*	43.5%
OTHER INGREDIENTS:	56.5%
TOTAL:	100.0%

*This product contains 4 pounds of active ingredient per gallon.

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 the label, find someone to explain it to you in detail.)

See FIRST AID Below

SHAKE WELL BEFORE USING

EPA Reg. No. 19713-231
EPA Est. No. 19713-GA-1 **Net Contents:_____**

FIRST AID
ORGANOPHOSPHATE

IF SWALLOWED:
- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give anything by mouth to an unconscious or convulsing person.

IF IN EYES:
- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.

Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.

NOTE TO PHYSICIAN: Atropine is antidotal. Pralidoxime chloride may be effective as an adjunct to atropine. This product may cause cholinesterase inhibition. Treatment should be directed at the control of symptoms and clinical condition. Dimethoate is an organophosphate insecticide/miticide.

PRECAUTIONARY STATEMENTS

Hazards To Humans and Domestic Animals

WARNING: Harmful or fatal if swallowed. Avoid breathing vapor or spray mist. Avoid contact with skin, eyes and clothing. May cause eye irritation. Use only with adequate ventilation. Do not contaminate food and feed products.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

Applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves, such as Barrier Laminate, Butyl Rubber or Viton, chemical-resistant footwear plus socks, protective eyewear and chemical-resistant headgear for overhead exposure.

(Continued)

PRECAUTIONARY STATEMENTS (Cont.)

For exposures in enclosed areas, a respirator with 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 exposures outdoors, 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/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control Statements: 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 HAZARDS

This product is toxic to wildlife and aquatic invertebrates. For terrestrial uses, do not apply directly to water, or 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 by cleaning of equipment or disposal of wastes.

This pesticide 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.

CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame. Do not use this product in or on electrical equipment due to possibility of shock hazard.

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.

Manufactured By:
Drexel Chemical Company
P.O. BOX 13327, MEMPHIS, TN 38113-0327
SINCE 1972

++ 231SP-111704++ (Pending)

rates use equivalent per acre rate in not less than 10 gallons of water per acre. Do not use air application on Pecans.

Automatic flagging devices should be used whenever feasible.

This product is intended for use in conventional hydraulic sprayers, ground applicators or aerial sprayers. Do not apply when weather conditions favor drift of spray from treated areas. Repeat applications as

the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely af-

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AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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) and restricted entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 48 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves, such as Barrier Laminate or Butyl Rubber, chemical-resistant footwear plus socks, protective eyewear and chemical-resistant headgear for overhead exposure.

BEFORE USING, READ WARNING STATEMENTS ON CONTAINER LABEL. DO NOT use on crops grown in greenhouses.

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

TANK MIXING: This product is compatible in spray tank mixes with most insecticides, miticides and fungicides, provided they are not alkaline in reaction. Field experience indicates that this product has been satisfactorily mixed with captan, carbaryl, diazinon, dodine, azinphos methyl, dicofol, malathion, parathion, Pyrethroids, thiram and zineb. Because uniform dispersibility and sprayability may be influenced by pesticide combinations used, it is recommended that compatibility be determined before adding pesticides to the spray tank.

In a pint or quart jar, mix products and water proportionate to the intended tank mix. If there is any separation, we recommend that the combination not be used. The addition of a non-ionic, general purpose spreader-activator will usually eliminate any incompatibility noted.

For proper mixing, spray tank should be at least three-fourths filled with water before adding this product. Add tank mixing products in the following order: water-soluble bags, wettable powders, dry flowables, liquid flowables, emulsifiable concentrates, and other soluble materials such as fertilizers. When tank mixing, allow water-soluble bags and soluble fertilizers to dissolve first before adding this product. Mechanical agitation or recirculation through pump bypass to tank is usually sufficient for maintaining a good dispersion. This product should not be tank-mixed with other pesticides, surfactants or fertilizers, unless prior use has shown the combination non-injurious under your conditions of use. Follow precautionary statements and directions for all tank-mix products.

Spray tank mixes of this product with alkaline insecticides, fungicides, miticides and fertilizers should be applied promptly; however, alkaline materials such as Bordeaux mixture and lime should not be used. Tank mixing must be done in accordance with the more (most) restrictive of label limitations and use precautions for all products to be mixed. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibiting such mixing.

PHYTOTOXICITY STATEMENT: As is common with most emulsifiable concentrate formulations, adverse effects such as spotting or dis-coloration of the fruit or foliage can occur. Some conditions known to contribute to phytotoxicity include, but are not limited to: high temperatures, poor spray drying conditions, excessive spray deposit or runoff, certain spray mixtures, stage of crop development or tank mixes with other pesticides.

RESISTANCE MANAGEMENT: Based on historical use patterns in some areas, certain pest species listed on this label may have developed resistance to this product. Consult your local agricultural advisor, state cooperative extension service or regional company representative for recommendations.

ODOR: Dimethoate formulations may produce a distinctive odor during the spray operation, but under normal conditions this odor does not persist.

DIRECTIONS FOR DILUTION UNLESS STATED

Dilute Application - **Ground Application For Field and Vegetable Crops:** Apply specified rate in 20 to 60 gallons of water per acre.

Concentrate Application - **Ground Application:** Apply specified rate in not less than 5 gallons of water per acre.

Orchard Application - Apply equivalent per acre rates in 20 to 100 gallons of water per acre. Special concentrate equipment is necessary for these uses.

Air Application - Apply at least one gallon of finished spray per acre. Apply at least 5 gallons of finished spray per acre in CA. Orchard rates use equivalent per acre rate in not less than 10 gallons of water per acre. Do not use air application on Pecans.

Automatic flagging devices should be used whenever feasible.

This product is intended for use in conventional hydraulic sprayers, ground applicators or aerial sprayers. Do not apply when weather conditions favor drift of spray from treated areas. Repeat applications as necessary unless otherwise specified. Consult your State Experiment Station or State Extension Service for proper timing of application.

The use of a drift retardant agent cleared for food use is recommended when applying this product by air or ground.

CHEMIGATION

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move, flood (basin), furrow, border or drip (trickle) irrigation system(s). Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from 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 system) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person shall shut the system down and make necessary adjustments should the need arise.

Mix, in a clean supply tank, the recommended amount of this product and any tank mixing products per acreage to be covered and needed quantity of water. On all crops, use sufficient gallonage of water to obtain thorough and uniform coverage, but not cause runoff or excessive leaching. This will vary depending on equipment, pest problem and state of crop growth. Application of more or less than optimal quantity of water may result in decreased chemical performance, crop injury or illegal pesticide residues. Meter this product into the irrigation water uniformly during the period of operation. Do not overlap application. Follow recommended label rates, application timing, and other directions and use precautions for crop being treated. Continuous mild agitation of pesticide mixture may be needed to assure uniform application, particularly if the supply tank requires a number of hours to empty.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

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

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the 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 pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of the fluid back toward the injection pump. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. Do not apply when wind speed favors drift beyond the area intended for treatment.

SPRINKLER CHEMIGATION (FOLIAR SPRAY USES)

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely af-

fected. 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. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. Do not apply when wind speed favors drift beyond the area intended for treatment.

FLOOD (BASIN), FURROW AND BORDER CHEMIGATION (SOIL DRENCH USE)

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

NUT CROPS

Crop	Pest Controlled	Rate per Acre	PHI (Days)
Pecans	Aphids, Mites, Leafhoppers	0.66 pt.	21
	SPECIFIC DIRECTIONS: Do not use air application. Do not graze livestock in treated groves.		

FRUIT CROPS

Fruit Crops	Pest Controlled	Rate	PHI (Days)
NON-BEARING: ~~Apples~~, Pears	Aphids, Leafhoppers, Mites (except Rust mites), Pear psylas	0.5 to 1 pt. per 100 gals. of water	–
	SPECIFIC DIRECTIONS: Use the higher application rate when insect pest population is high. Do not graze livestock in treated orchards. Do not apply when trees or substantial numbers of weeds in the orchard (grove) are in bloom.		
Cherries (Pre-harvest) (ID, MT, OR, UT and WA only)	Aphids, Cherry fruit flies, Mites	**Dilute Application:** 0.5 to 1 pt. in a minimum of 100 gals. of water. **Concentrate Application:** 2 to 4 pts. in a minimum of 50 gallons of water per acre	21
	SPECIFIC DIRECTIONS: Use the higher application rate when insect pest population is high. On mature Tart cherries, use 3 pts. per acre. On mature Sweet cherries, use 4 pts. per acre. Precautions should be taken when using concentrate sprays to avoid fruit marking and injury on sensitive varieties (such as Ranier species). 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. Do not apply when trees or substantial numbers of weeds in the treatment area are in bloom. Do not graze livestock in treated orchards.		

FRUIT CROPS *(Continued)*

Fruit Crops	Pest Controlled	Rate	PHI (Days)
Cherries (Post-harvest) (ID, MT, OR, UT and WA only)	Aphids, Cherry fruit flies, Mites	**Dilute Application:** 0.5 to 1 pt. in a minimum of 100 gals. of water. **Concentrate Application:** 2 to 4 pts. in a minimum of 50 gallons of water per acre	--
	SPECIFIC DIRECTIONS: 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. For best results, make application before fruit hardens or drops. 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. Use the higher application rate when insect pest population is high.		
Grapefruit, Kumquats, Lemons, Limes, Oranges, Pummelos, Tangelos, Tangerines	Aphids, Mites, (except Rust), Thrips, Whitefiles	**Ground Application:** 0.5 to 1 pt. in 50 to 100 gals. of water for dilute application. Apply as a thorough distribution coverage spray. **Concentrate Application (Mist):** Apply 1 to 2 qts. per acre in sufficient water to provide full coverage of foliage. **Air Application:** 1 to 2 qts. per acre in 5 to 10 gals. of water. Use higher rate if infestation is heavy or if orchard foliage is dense.	15
	Scales (except Black or Snow)	**Ground Application:** 0.5 to 1.5 pts. in 50 to 100 gals. for dilute application. Apply as a thorough distribution coverage spray. **Concentrate Application (Mist):** 1 to 2 qts. per acre in sufficient water to provide full coverage of foliage. **Air Application:** 1 to 2 qts. per acre in 5 to 10 gals. of water. Use higher rate if infestation is heavy or if orchard foliage is dense.	15 or 45 (See Note below)
	SPECIFIC DIRECTIONS: Use the higher application rate when insect pest population is high. Do not apply when trees or substantial numbers of weeds in the orchard are in bloom. Do not use on Citrus seedlings. Do not graze livestock in treated orchards. Make no more than 2 applications to mature fruit. **Note:** When using higher rate for Scale control, PHI is 45 days.		
Citrus, Grapefruit, Lemons, Oranges, Tangerines (AZ Only)	Thrips	See *"SPECIFIC DIRECTIONS"*	15
	SPECIFIC DIRECTIONS: Use specified dosages of this product in the amount of water necessary to achieve adequate coverage of foliage. The type of equipment used will determine the concentration required. **Air Application** - Apply up to 2 lbs. of active ingredient (2 qts.) in not less than 5 gals. of water per acre. **Ground Application** - Apply up to 2 lbs. of active ingredient (2 qts.) in not less than 20 gals. of water per acre. 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 is 10% open blooms until such time as there has been at least 75% petal fall on the north side of the trees. Applications of dimethoate shall be limited to that period of time between one (1) hour after sunset to three (3) hours before sunrise when any one of the following conditions prevail: 1) Before the onset of petal fall, the orchard to be treated has open blooms present and these 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 15th and May 1st. All applications of dimethoate on 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 the status of bloom of the orchard to be treated as it was at the time of the application shall be indicated in the section for "Label Restrictions/Special Instructions". Both private and custom applicators shall mail 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.		

FRUIT CROPS *(Continued)*

Fruit Crops	Pest Controlled	Rate	PHI (Days)
Citrus (AZ & CA: Non-bearing and Nursery stock)	Aphids, Thrips	**Foliar Spray:** 1 pt. per 100 gals. of 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. per 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 1 year.	–
	SPECIFIC DIRECTIONS: Do not apply when trees or substantial numbers of weeds in the orchard are in bloom. Do not graze livestock in treated orchards.		
Pears	Aphids, Leafhoppers, Pear psyllas, Mites (except Rust)	**Ground Application:** 0.5 to 1 pt. for dilute application. Apply as a thorough distribution coverage spray. **Concentrate Application (Mist):** 1 to 2 qts. per acre in sufficient water to provide full coverage of foliage. **Air Application:** 1 to 2 qts. per acre in 5 to 10 gals. of water.	28
	SPECIFIC DIRECTIONS: Use the higher rate if insect pest population is high 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. See also *"NON-BEARING: ~~Apples~~ Pears"*.		

VEGETABLE CROPS

Vegetable Crops	Pest Controlled	Rate* per Acre	PHI (Days)
Asparagus (Except AZ & CA)	Aphids, Asparagus beetles	1 pt.	180
	SPECIFIC DIRECTIONS: Apply after the last harvest at no less than 7-day intervals, up to a maximum of 5 pts. per acre per year. Do not apply less than 180 days before harvest.		
Beans (Dry, Green, Lima, Lupine, Snap)	Aphids, Bean leaf beetles, Grasshoppers, Leafhoppers, Leafminers, Lygus bugs, Mexican bean beetles, Mites	0.5 to 1 pt.	0
	SPECIFIC DIRECTIONS: Do not feed treated vines. Do not apply if bees are visiting the area to be treated when crops or weeds are in bloom.		
Broccoli, Cauliflower	Aphids	0.5 to 1 pt.	7
Brussels sprouts (CA Only)	Aphids	1 to 2 pts.	10
	SPECIFIC DIRECTIONS: Apply in a minimum of 50 gals. of water per acre by ground equipment. Do not graze livestock in treated fields. Do not apply by air. Do not exceed 6 applications per growing season.		
Celery	Carmine mites, Leafminers, Twospotted spider mites	1 pt.	7
Endive (Escarole), Kale, Leaf lettuce, Mustard greens, Swiss chard, Turnip (Greens, Roots)	Aphids, Leafhoppers, Leafminers	0.5 pt.	14
Garbanzo beans	Aphids, Grasshoppers, Leafhoppers, Leafminers, Lygus bugs, Mites	0.5 to 1 pts.	0
	SPECIFIC DIRECTIONS: Do not feed or graze treated vines. Do not apply if bees are visiting the area to be treated when crops or weeds are in bloom.		
Lentils **(Continued)**	Aphids	0.33 to 1 pt.	14
	SPECIFIC DIRECTIONS: Do not feed or graze treated plants. Do not make more than two applications per season. Do not apply if bees are visiting the areas to be treated when crops or weeds are in bloom.		
*Where a range of application rate is indicated, apply the higher rate when insect pest population is high.			

VEGETABLE CROPS *(Continued)*

Vegetable Crops	Pest Controlled	Rate* per Acre	PHI (Days)
Lentils **(Cont.)**	Lygus bugs	1 pt.	14
	SPECIFIC DIRECTIONS: Do not feed or graze treated plants. Do not make more than 2 applications per season. Do not apply if bees are visiting the areas to be treated when crops or weeds are in bloom.		
Lentils (WA only)	Aphids, Lygus bugs	0.25 to 1 pt.	14
	SPECIFIC DIRECTIONS: Apply when insects first appear. Repeat as needed. Do not feed or graze hay or treated vines. **Note:** CHEMIGATION - Do not apply through any type of irrigation system.		
Melons (Except Watermelons)	Aphids, Leafhoppers, Leafminers, Maggots, Thrips	1 pt.	3
Peas	Aphids	0.33 to 1 pt.	0
	SPECIFIC DIRECTIONS: Do not feed or graze hay within 21 days after last application when a stationary viner is used. Do not feed or graze when a mobile viner is used. Do not make more than 1 application per growing season. Do not apply if bees are visiting the areas to be treated when crops or weeds are in bloom.		
	Lygus bugs	1 pt.	0
	SPECIFIC DIRECTIONS: Do not feed or graze hay within 21 days after last application when a stationary viner is used. Do not feed or graze when a mobile viner is used. Do not make more than 1 application per growing season. Do not apply if bees are visiting the areas to be treated when crops or weeds are in bloom.		
Peas (Dry) (ID, OR and WA only)	Aphids	0.33 to 0.66 pt.	14
	SPECIFIC DIRECTIONS: Apply in a minimum spray volume of not less than 5 gals. of water per acre by ground or air application. Do not exceed 1 pt. per acre per year. Allow at least 7 days between applications. Do not graze livestock on cover crops in treated areas. **Note:** This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product to blooming Austrian Winter peas. Apply as a pre-bloom or post-bloom spray only. CHEMIGATION: Do not apply through any type of irrigation system.		
Peas (Succulent) (ID, OR and WA only)	Aphids	0.33 pt.	5
		0.5 to 0.66 pt.	14
	SPECIFIC DIRECTIONS: Apply in a minimum spray volume of not less than 5 gals. of water per acre by ground or air application. Do not exceed 1 pt. per acre per year. Allow at least 7 days between applications. Do not graze livestock on cover crops in treated areas. **Note:** This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product to blooming Austrian Winter peas. Apply as a pre-bloom or post-bloom spray only. CHEMIGATION: Do not apply through any type of irrigation system.		
Peas (Succulent - With Pod) (CA Only)	Aphids, Leafminers, Thrips	0.33 pt.	2
	SPECIFIC DIRECTIONS: Multiple applications may be made at 14-day intervals. Do not exceed 0.68 lb. a.i. (1.36 pts. of this product) per acre per season. Do not make more than 4 applications per growing season.		
Peppers	Aphids, Leafminers, Maggots	0.5 to 0.66 pt.	0
Potatoes	Aphids, Grasshoppers, Leafhoppers, Leafminers	0.5 to 1 pt.	0
Tomatoes	Aphids, Leafhoppers, Leafminers	0.5 to 1 pt.	7
Watermelons	Aphids, Leafhoppers, Leafminers, Maggots, Thrips	0.5 to 2 pts.	3
*Where a range of application rate is indicated, apply the higher rate when insect pest population is high.			

FIELD CROPS

Field Crops	Pest Controlled	Rate* per Acre	PHI (Days)
Alfalfa, Sainfoin	Aphids, Grasshoppers, Leafhoppers, Plant bugs including Lygus, reduction of Alfalfa weevil larvae	0.5 to 1 pt.	10
	SPECIFIC DIRECTIONS: Do not apply within 10 days of harvest or pasturing. Make only 1 application per cutting. Effective only on cutting to which applied. Do not apply if bees are visiting the area to be treated when crops or weeds are in bloom.		
Cotton (Grown in AZ and CA)	Black Fleahoppers, Leafhoppers, Plant bugs including Lygus, Thrips	0.5 to 1 pt.	14
	SPECIFIC DIRECTIONS: 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 in treated fields.		
*Where a range of application rate is indicated, apply the higher rate when insect pest population is high.			

FIELD CROPS *(Continued)*

Field Crops	Pest Controlled	Rate* per Acre	PHI (Days)
Cotton (Except AZ and CA)	Aphids, Fleahoppers, Mites, Plant bugs, Thrips	0.25 to 0.5 pt.	14
	SPECIFIC DIRECTIONS: When water is used for dilution, repeat applications should not be made at intervals closer than 14 days. When once refined vegetable oil is used for dilution, repeat applications should not be made at intervals closer than 40 days. Make only 2 applications per season at the higher rate. Apply at least 1 qt. of finished spray per acre. Do not feed treated forage or graze livestock on treated fields.		
	Lygus bugs	0.5 pt.	14
	SPECIFIC DIRECTIONS: When water is used for dilution, repeat applications should not be made at intervals closer than 14 days. When once refined vegetable oil is used for dilution, PHI is 40 days. Make only 2 applications per season at the higher rate. Apply at least 1 qt. of finished spray per acre. Do not feed treated forage or graze livestock on treated fields.		
Field corn	Aphids, Banks grass mites (except Trans Pecos area of TX), Bean beetles, Corn rootworms (adults), Fleahoppers, Thrips, Two-spotted spider mites	0.66 to 1 pt.	14
	SPECIFIC DIRECTIONS: Apply as necessary. Make no more than 3 applications per year. Do not feed or graze within 14 days of last application. Do not apply to Corn during the pollen-shed period if bees are visiting the area. **Ground Application** - Apply above rate in 20 to 40 gals. of water per acre. **Air Application** - Apply above rates in 1 or more gals. of water per acre.		
	Grasshoppers	1 pt.	14
	SPECIFIC DIRECTIONS: **Ground Application** - Apply above rates in 20 to 40 gals. of water per acre. **Air Application** - Apply above rate in 1 or more gals. of water. Do not apply to Corn during the pollen-shed period if bees are visiting the area. Make no more than 3 applications per year. Do not feed or graze within 14 days of last application.		
Safflower (Grown in AZ and CA)	Aphids, Leafhoppers, Plant bugs including Lygus, Thrips	0.5 to 1 pt.	14
	SPECIFIC DIRECTIONS: Repeat applications should not be made at intervals closer than 14 days. Make only 2 applications per season at the higher rate.		
Sorghum (Milo)	Aphids (Green bugs)	0.5 to 1 pt.	28
	SPECIFIC DIRECTIONS: **Ground Application** - Apply above rates in 25 to 40 gals. of water per acre. **Air Application** - Apply above rates in 1 or more gal. of water per acre. Do not feed or graze Milo within 28 days of last application. Make no more than 3 applications as needed per season. Do not apply after heading. Do not apply during the pollen-shed period.		
	Grasshoppers, Mites (including Banks grass mites [excluding Trans Pecos area of TX]), Twospotted spider mites	1 pt.	28
	SPECIFIC DIRECTIONS: **Ground Application** - Apply above rates in 25 to 40 gals. of water per acre. **Air Application** - Apply above rates in 1 or more gal. of water per acre. Do not feed or graze Milo within 28 days of last application. Make no more than 3 applications as needed per season. Do not apply after heading. Do not apply during the pollen-shed period.		
	Sorghum midge	0.25 to 0.5 pt.	28
	SPECIFIC DIRECTIONS: **Ground Application** - Apply above rates in 25 to 40 gals. of water per acre. **Air Application** - Apply above rates in 1 or more gal. of water per acre. Do not feed or graze Milo within 28 days of last application. Make no more than 3 applications as needed per season. Do not apply after heading. Do not apply during the pollen-shed period.		
Soybeans (Continued)	Alfalfa loopers, Aphids, Bean leaf beetles, Leafhoppers, Mexican bean beetles, Spider mites, Threecornered alfalfa hoppers	1 pt.	21
	SPECIFIC DIRECTIONS: **Ground Application** - Apply above rate in 25 to 40 gals. of water per acre. **Air Application** - Apply above rate in a minimum of 1 gal. of water per acre. Do not feed or graze within 5 days of last application.		
*Where a range of application rate is indicated, apply the higher rate when insect pest population is high.			

FIELD CROPS *(Continued)*

Field Crops	Pest Controlled	Rate* per Acre	PHI (Days)
Soybeans (Cont.)	Grasshoppers	1 pt.	21
	SPECIFIC DIRECTIONS: **Ground Application** - Apply above rate in 25 to 40 gals. of water per acre. **Air Application** - Apply above rate in 1 or more gals. of water per acre. Do not feed or graze within 5 days of last application.		
Triticale, Wheat	Aphids, (Greenbugs), Wheat midges	0.5 to 0.75 pt.	35
	SPECIFIC DIRECTIONS: Do not apply within 14 days of grazing immature plants. Make no more than 2 applications per season. **Note:** Pre-harvest interval for CA is 60 days.		
	Brown wheat mites	0.33 to 0.5 pt.	35
	SPECIFIC DIRECTIONS: Do not apply within 14 days of grazing immature plants. Make no more than 2 applications per season. **Note:** Pre-harvest interval for CA is 60 days.		
	Grasshoppers	0.75 pt.	35
	SPECIFIC DIRECTIONS: Do not apply within 14 days of grazing immature plants. Make no more than 2 applications per season. **Note:** Pre-harvest interval for CA is 60 days.		
*Where a range of application rate is indicated, apply the higher rate when insect pest population is high.			

SEED CROPS

Seed Crops	Pest Controlled	Rate* per Acre	PHI (Days)
Alfalfa	Aphids, Grasshoppers, Leafhoppers, Lygus bugs, reduction of Alfalfa weevil larvae	0.5 to 1 pt.	10
	SPECIFIC DIRECTIONS: Do not apply if the crops or weeds in the treatment area are in bloom. Do not feed or graze livestock in treated crop, hay, threshings or stubble within 10 days of application.		
Grasses grown for seed (ID, OR, WA only)	Aphids, Plant bugs, Thrips, Winter grain mites	0.5 to 0.66 pt.	14
	SPECIFIC DIRECTIONS: Apply in a minimum of 2 gals. of water per acre. Apply by ground or aerial equipment. Do not graze or use seed or seed screenings for feed purposes. DO NOT USE on seed Bermudagrass, seed Carrots, or seed Onions.		
*Apply the higher application rate when insect pest population is high.			

ORNAMENTAL PLANTS GROWN IN OUTDOOR NURSERIES ONLY

Do not use this product on ornamental plants grown in greenhouses, shade houses, landscapes, interiorscapes and residential, public, recreational, commercial, industrial and institutional establishments.

This product 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 one-half teaspoonful of product per inch of tree circumference measured at approximately 4.5 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.

Plant	Pest Controlled	Rate of Application
Arborvitae	Aphids, Bagworms, Mites	2 tsps. per gal. water (3.5 fl. ozs. per 10 gals. water)
Azaleas	Lace bugs, Leaf miners, Mites, Tea scale and White flies	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
Birch	Aphids, Leafminers	0.5 to 1 tsp. per gal. water (0.8 to 1.75 fl. ozs. per 10 gals. water)
	SPECIFIC DIRECTIONS: For Leafminers, apply when leaves are expanded and repeat in 6 weeks. Use the higher rate of application when insect pest population is high.	
Boxwood	Leafminers, Mealybugs and Mites	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
	SPECIFIC DIRECTIONS: For Leafminers, apply in Spring when Leafminer flies first appear or in early Summer for control of larvae.	
Camellias	Aphids, Camellia scale and Tea scale, Mites	**Foliar Spray:** 1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water) **Soil Drench:** 2 fl. ozs. in 1 gal. water
	SPECIFIC DIRECTIONS: Using the Soil Drench method, use 2 fl. ozs. in 1 gallon of water for plants up to 6 inches 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. ozs. per 500 sq. ft. of bed or bench.
	SPECIFIC DIRECTIONS: Apply in sufficient water for even distribution. Water in thoroughly following application.	
Cedar	Mites	2 tsps. per gal. water (3.5 fl. ozs. per 10 gals. water)
Christmas trees	Bagworms, Balsam twig aphids, Blue aphids, European pine shoot moths, Mites, Nantucket pine tip moths, Zimmerman pine moths	3 tsps. per gal. water (5.25 fl. ozs. per 10 gals. water)
	SPECIFIC DIRECTIONS: Do not use on Japanese maples or Red leaf ornamental species.	
Cottonwood (Poplar)	Aphids, Bagworms, Leaf beetles	**Foliar Spray:** Apply 2 ozs. per 6 gals. water. **Soil Injection:** 0.08 oz. per inch of tree circumference
	SPECIFIC DIRECTIONS: (Foliar spray) - Apply 2 ozs. per 6 gallons of water. Repeat on a 10 day interval, as necessary, up to 4 sprays per year. (Soil Injection) - Apply at a rate of 0.08 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) - 1.33 to 4 pints per acre through drip line. Application may be repeated two times. Refer to the Chemigation section for additional application information.	
Cypress	Bactra moth larvae	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
	SPECIFIC DIRECTIONS: Apply as a drenching spray.	
Daylilies	Aphids, Thrips	2 tsps. per gal. water (3.5 fl. ozs. per 10 gals. water)
Douglas fir	Fir cone midge	4 tsps. per gal. water (7 fl. ozs. in 10 gals. water)
	SPECIFIC DIRECTIONS: Make thorough coverage application when cones are closed and pendant. Use hydraulic or backpack sprayer.	
Fraser fir	Rosette bud mites	1 to 2 tsps. per gal. water (1.33 pints per 100 gals. water)
	SPECIFIC DIRECTIONS: Use a high pressure hydraulic sprayer with a handheld spray gun to thoroughly wet trunk and limbs on front and back of tree. Use the higher rate of application if insect pest population is high.	

Continued

Plant	Pest Controlled	Rate of Application
Euonymus	Aphids, Scales	1 to 2 tsps. per gal. water (1.75 to 3.5 fl. ozs. per 10 gals. water)
	SPECIFIC DIRECTIONS: Use the higher rate of application if insect pest population is high.	
Ficus nitida	Thrips	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
Gardenias	Tea scale and Whitefly	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
Gerberas	Thrips	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
Gladiolus	Aphids, Thrips	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
Hackberry	Hackberry budgall psyllid, Hackberry nipplegall psyllid	**Soil Injection:** 1 part to 3 parts dilution
	SPECIFIC DIRECTIONS: Use a 1:3 dilution (1 part of this product to 3 parts water). Apply using a low-pressure injector. Inject 1 fl. oz. of the dilution 6 inches below ground for each one-half 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, Scales	1 tsp. per gal. water (1.75 fl. oz. per 10 gals. water)
Holly (English & American, not Burford variety)	Leafminers, Mites, Soft scale	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
	SPECIFIC DIRECTIONS: For Leafminers, apply in Spring when Leafminer flies first appear, or in early Summer, for control of larvae in infested leaves.	
Honeysuckle	Honeysuckle aphid	**Soil Injection:** 1 part to 3 parts dilution (1 fl. oz. of this product for every 3 fl. ozs. of water)
	SPECIFIC DIRECTIONS: Use a 1:3 dilution (1 fl. oz. of this product for every 3 fl. ozs. of water). Apply using a low-pressure injector. Inject 1.25 fl. ozs. of the dilution 6 inches below ground for each one-half 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 tsps. per gal. water (3.5 fl. ozs. per 10 gals. water)
	SPECIFIC DIRECTIONS: For borer control, spray when new leaves are 5 to 6 inches tall.	
Oak	Golden oak scale	2 tsps. per gal. water (3.5 fl. ozs. per 10 gals. water)
Pines, Juniper	Aphids, Bagworms, European pine shoot moth, Midges, Mites, Zimmerman pine moth	2 tsps. per gal. water (3.5 fl. ozs. per 10 gals. water)
	Loblolly pine sawfly, Nantucket pine tip moth	3.5 tsps. per gal. water (6 fl. ozs. per 10 gals. water)
Pinyon pine	Pinyon needle scale	2.5 tsps. per gal. water (12.5 fl. ozs. per 10 gals. water)
	SPECIFIC DIRECTIONS: 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:** 1 part to 3 parts dilution (1 fl. oz. of this product for every 3 fl. ozs. of water)
	SPECIFIC DIRECTIONS: Use a 1:3 dilution (1 fl oz. of this product for every 3 fl. ozs. of water). Apply using a low-pressure injector. Inject 1.5 fl. ozs. of the 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	Aphids, Mealybugs, Mites, Whiteflies	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
Roses	Aphids, Leafhoppers, Mites, Thrips	1 tsp. per gal. water (1.75 fl. ozs. per 10 gals. water)
	SPECIFIC DIRECTIONS: For **Foliar spray** apply 2 sprays 6 weeks apart the first year followed by annual applications soon after the first growth begins in the Spring. For **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, Mealybugs, Mites	2 tsps. per gal. water (3.5 fl. ozs. per 10 gals. water)

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry, well ventilated area. Avoid high temperatures. Do not store below 45°F.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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 by other procedures approved by State and Local authorities.

WARRANTY—CONDITIONS OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith.

In no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.