



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

446628

Ms. Nancy Hilton  
FMC Corporation  
1735 Market Street  
Philadelphia, PA 19103

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

JUL 15 1993

Dear Ms. Hilton:

Subject: Amendments - Supplemental Label for use  
in California only; and  
Additional Brand Name

Thiodan 2 C.O. EC Insecticide

EPA Reg. No. 279-2659

Your label submissions dated May 24 and July 6, 1993

The amendments referred to above, submitted in connection with a registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, are acceptable. It should be understood that acceptance of the supplemental labeling for use only in the State of California to address CAL-EPA's criteria for issuing permits by a County Agriculture Commissioner for the subject product does not constitute the Agency's determination in regard to the reregistration of endosulfan, nor does it represent the Agency's conclusions based upon review of any data, nor should it be construed in any way as signifying the Agency's agreement or determination that the instructions and restrictions appearing on the supplemental labeling for use in California only adequately address the issues of mitigating off-target movement and aquatic exposure. The Agency reserves these decisions until all data submitted in support of reregistration for endosulfan have been reviewed and evaluated. A stamped copy of the label is enclosed for your records.

The additional brand name "Thiodan Cottonseed Oil" is acceptable and will be added to this product's registration records. Please note that label submissions that accompany amendment applications should bear the master product name "Thiodan 2 C.O. EC", rather than the additional brand name.

Sincerely,

A handwritten signature in black ink, appearing to read "George T. LaRocca".

George T. LaRocca  
Product Manager (13)  
Insecticide Rodenticide Branch  
Registration Division (H7505C)



Recycled/Recyclable  
Printed with Soy/Canola Ink on paper that  
contains at least 50% recycled fiber

P.S. Note that this acceptance of your label does not relieve you of your obligation to comply with the Worker Protection Standard. If any of your products are covered by this Standard, you are required to submit, and receive the Agency's approval by April 21, 1994, a revised label reflecting the required label statements of 40 CFR 156, published in the **FEDERAL REGISTER** on August 21, 1992 (57 FR 38102). Please refer to PR Notice 93-7 for further guidance. According to 40 CFR 156, subpart K, "No product to which this subpart applies shall be distributed or sold without amended labeling by any registrant after April 21, 1994. Please call 1-800-777-2185 if you have any labeling questions regarding the Worker Protection Standard.

Code 31994

Thiodan 2 C.O.E.C

399

Net Contents

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# Thiodan® Cottonseed Oil Insecticide

← Alternate Brand Name

For Agricultural or Commercial Use Only

EPA Reg. No. 279-2659

EPA Est. 279-

<b>Active Ingredient:</b>	<b>By Wt.</b>
Endosulfan; Hexachlorohexahydromethano-2,4,3-benzodioxathiepin 3-oxide .....	23.1%
<b>*Inert Ingredients:</b> .....	76.9%
	100.0%

\*Contains Xylene Range Aromatic Solvents  
Thiodan Cottonseed Oil contains 2 pounds Endosulfan (Thiodan) per gallon.

## PRECAUTIONARY STATEMENTS Hazards to Humans (and Domestic Animals)

**Danger**  
Fatal if swallowed. May be fatal if inhaled or absorbed through skin. Causes moderate eye irritation. Do not breathe vapor or spray mist. Do not get in eyes, on skin, or on clothing.

Applicators must wear a long sleeve shirt, trousers, unlined waterproof gloves made of natural rubber or neoprene, full foot covering (such as shoes or boots), head covering (such as a hat), and a pesticide mask or respirator jointly approved by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part 11 for protection against endosulfan. Mixers and/or loaders must wear a chemical resistant apron and goggles or face shield in addition to all of the protective equipment specified for applicators.

Do not apply or allow to drift to areas occupied by unprotected humans or beneficial animals. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse.

## Environmental Hazards

This product is toxic to fish, birds and other wildlife. Birds feeding on treated areas may be killed. Do not apply directly to water or wetlands. Due to risk of runoff and drift, do not apply within a distance of 300 feet of lakes, ponds, streams, and estuaries. Shrimp and crab may be killed at application rates recommended on this label. Do not apply where fish, shrimp, crab and other aquatic life are important resources. This product must not be used in areas where impact on threatened endangered species is likely. Contact your State Fish and Game Agency before applying this product. Apply this product only as specified on this label.

This pesticide is toxic to bees exposed to direct application. Applications should be timed to coincide with periods of minimum bee activity, usually between late evening and early morning.

## Physical/Chemical Hazards

Do not use or store near heat or open flame.

## DIRECTIONS FOR USE

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

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

## Reentry Statement

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

Do not enter treated areas without protective clothing for 24 hours.

Protective clothing means, at least, a hat or other suitable head covering, a long sleeved shirt and long legged trousers or a coverall type garment (all of closely woven fabric covering the body, including the arms and legs), shoes and socks.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, such as the 48-hour reentry interval established by California, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Inform workers of areas or fields that may not be entered without specific protective clothing, period of time field must be vacated and appropriate actions to take in case of accidental exposure. An example of such information is given under written warnings. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information:

KEEP OUT OF REACH OF CHILDREN

 DANGER-POISON 

PELIGRO

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

## STATEMENT OF PRACTICAL TREATMENT

**If swallowed:** Call a physician or Poison Control Center immediately. If possible, vomiting should be induced under medical supervision. Drink one or two glasses of water and induce vomiting by giving one (1) ounce of syrup of ipecac, if available, or by touching the back of the throat with a finger. Do not induce vomiting or give anything by mouth to a person who is unconscious or convulsing.

**If inhaled:** Remove victim to fresh air. Apply artificial respiration if indicated.

**If on skin:** Remove contaminated clothing and wash skin with soap and water. Get medical attention.

**If in eyes:** Flush eyes with plenty of water. Call a physician immediately.

**Note to Physician:** Endosulfan is a central nervous system stimulant absorbable by mouth, inhalation or through contact with skin. It may cause convulsions. There is no specific antidote. Diazepam i.v. is the drug of choice. Barbituric acid derivatives such as Phenobarbital may be used additionally. A neuromuscular blocking agent may be used if convulsions persist. This type of drug may be used only if complete control of respiration can be maintained. Epinephrine derivatives are absolutely contraindicated. Solvent may present aspiration hazard.

For Emergency Assistance Call (800) 331-3148.

See other panels for additional precautionary information.

**FMC**

FMC Corporation  
Agricultural Chemical Group  
Philadelphia PA 19103

3/93

ACCEPTED  
with COMMENTS  
in EPA Letter Dated

JUL 15 1993

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 279-2659

**DANGER**

Area treated with endosulfan on (insert date). Do not enter without appropriate protective clothing for 24 hours (insert State Department of Agriculture's reentry interval, if more restrictive).

In case of accidental exposure to pesticide spray, wash the skin thoroughly with soap and water. Remove contaminated clothing and wash before reuse. If in eyes, flush with plenty of water. If inhaled, go to an area where the pesticide has not been applied. Get medical attention if needed.

**STORAGE AND DISPOSAL**

**Pesticide Storage**

Do not store below 0°F. (-18°C).

Do not use or store near heat, open flame or hot surfaces.

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call FMC: 1-(800)-331-3148.

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

**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**

Metal Containers: 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. Do not cut or weld metal containers.

Plastic Containers: 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.

See SUPPLEMENTAL LABEL FOR DIRECTIONS FOR USE IN CALIFORNIA. Not For Use Or Storage In Or Around The Home

Apply the listed amount per acre when insects first appear and repeat as required, unless otherwise noted, to maintain effective control. Unless otherwise noted, use in sufficient water for thorough coverage of listed crops. Coverage of upper and lower leaf surfaces is essential for good control. For ground application, apply recommended amount of pesticide in a minimum of 10 gallons of water per acre on vegetable or row crops. Observe use limitations. If insect control is required beyond the following use patterns, supplement the control program with other suitable pesticides.

When applying this material by aircraft, mix the recommended amount with sufficient water to provide a minimum of 1 gallon finished spray per acre on vegetable and field crops, unless otherwise noted, and a minimum of 20 gallons of finished spray per acre on fruit and nut trees and on vines. Where more than 2 quarts are recommended, mix with sufficient water to provide a minimum of finished spray equal to twice the amount of Thiodan Cottonseed Oil insecticide used.

Do not plant root crops other than carrots, potatoes, sweet potatoes, and sugar beets as follow-up crops. Observe days interval between last application and harvest indicated by number in ( ) following the crop name.

Almonds: Peach Twig Borer—Use 4 to 5 quarts per acre for control of early season infestation. Apply during popcorn, pink or petal fall in a minimum of 200 gallons dilute or 40 gallons per acre concentrate. (For areas less than one acre use 1 quart per 100 gallons). Do not exceed one application per season. Do not graze livestock on orchard crops or grasses in treated areas.

Apples: Apple Aphid, Rosy Apple Aphid—Use 1 quart per 100 gallons of water or 4 to 5 quarts per acre. Do not make more than 3 applications during the fruiting period nor apply within 21 days of harvest; or do not apply within 30 days of harvest with no limit on the number of applications. Apple Rust Mite—Use 1½ to 2 pints per 100 gallons of water or 6 to 8 quarts per acre. Woolly Apple Aphid—Use 1 quart per 100 gallons (8 quarts per acre). If 5 quarts or less are applied per acre may be applied within 30 days of harvest with no limit on number of applications; or if no more than 3 applications are made during the fruiting period do not apply within 21 days of harvest. Do not apply more than twice during the fruiting period. Do not feed pomace to livestock. Do not apply within 30 days of

harvest. Do not feed cull fruits to animals nor allow livestock to graze treated orchards.

Apricots, Nectarines: Catfacing Insects, Green Peach Aphid, Peach Twig Borer—Use 1 quart per 100 gallons of water or 4 to 5 quarts per acre. Peach Silver Mite—Use 1 pint per 100 gallons of water or 4 to 5 quarts per acre. Do not make more than 2 applications during the fruiting period. Do not apply within 30 days of harvest. Peachtree Borer—Use 1½ quarts per 100 gallons of water (1 quart per 100 gallons of water in Western Areas). Spray all bark areas from ground level to scaffold limbs. Do not apply within 21 days of harvest. Do not feed cull fruits to animals nor allow livestock to graze treated orchards.

Artichokes (7): Artichoke Aphid, Green Peach Aphid—Use 1½ quarts per acre. Artichoke Plume Moth—Use 2 quarts per acre.

Barley, Oats, Rye, Wheat: Army Cutworms—Use 1 quart per acre. Do not apply after heads begin to form. Do not feed treated forage to dairy animals or animals being finished for slaughter. For airplane application, use 2 quarts in 2 gallons diesel fuel oil per acre.

Beans, Dry and Succulent (3): Bean Leafskeltonizer, Black Bean Aphid, Cucumber Beetles, Green Stink Bug, Mexican Bean Beetle—Use 1 to 2 quarts per acre. Do not make more than 3 applications per season. Do not feed treated threshings to livestock or allow to graze in treated fields. Do not use on lima beans that are to be removed from the field for processing.

Blueberries: Blueberry Bud Mite—Use 3 quarts per acre in 300 gallons of water. Apply immediately after harvest, and repeat 6 to 8 weeks later. Do not apply after buds are well formed.

Broccoli (7), Brussels Sprouts (14), Cabbage (7), Cauliflower (14): Cabbage Aphid, Cabbage Looper, Cross-Striped Cabbageworm, Diamondback Moth Larvae, Flea Beetle, Harlequin Bug, Imported Cabbageworm, Stink Bug—Use 3 to 4 pints per acre.

Carrots (7): Green Peach Aphid—Use 1 to 2 quarts per acre. Do not make more than 2 applications. Do not use tops for food or feed.

Celery, Whole Plant (7): Green Peach Aphid—Use 1 quart per acre. (4): Green Peach Aphid, Cabbage Looper—Use 1 to 2 quarts per acre. Do not make more than 3 applications.

Cherries (21): Eyespotted Bud Moth (Pacific Northwest Only)—Use 1 quart per 100 gallons of water. Apply during "popcorn" stage of growth. Fruittree Leafroller (Pacific Northwest Only)—Use 1 quart per 100 gallons of water. Apply during pre-pink stage of growth. Black Cherry Aphid, Plum Nursery Mite—Use 1 quart per 100 gallons of water (4 to 5 quarts per acre). Minola Moth (Michigan Only)—Use 2 quarts per 100 gallons. Apply in delayed dormant period. Do not feed cull fruits to animals nor allow livestock to graze treated orchards.

Do not make more than 2 applications after shuck split.

Cherry, Plum, and Peach Nursery Stock: Peachtree Borer—Use 1 gallon per 40 gallons of water. Mix thoroughly. Immerse the bundles of trees so that the roots and crowns are covered well above the grafting bud scar. If trees are not planted immediately, allow to dry before returning them to storage. Wear rubber gloves during the dipping operation.

Citrus—Non-Bearing Trees and Nursery Stock: Citrus Aphid—Use 1 pint per 100 gallons of water or 5 quarts per acre. Do not apply to bearing trees or trees that will bear fruit within 12 months. NOTE: Shrimp and crab may be killed at application rates recommended on this label. Do not apply where these are important resources.

Collards (21): Cabbage Looper, Diamondback Moth Larvae, Harlequin Bug, Imported Cabbageworm—Use 3 pints per acre. Do not make more than 1 application.

Corn—Seed Crop Only: Corn Earworm—Use 2 to 3 quarts per acre. Direct spray to area of cornsilk. Corn Leaf Aphid—Use 2 quarts per acre. Do not apply more than 5 times. Do not feed treated forage of ensilage to livestock or allow livestock to graze in treated fields. Do not use seed for food, feed, or oil purposes.

Corn—Sweet (0): For Fresh Vegetable Use Only. Corn Leaf Aphid—Use 2 to 3 quarts per acre. Corn Earworm—Use 3 quarts per acre. For Corn Earworm, apply at 2 to 3 day intervals beginning when silks first appear and continuing until they begin to dry. Do not apply more than 5 times. Do not apply to sweet corn to be processed. Do not feed treated forage or ensilage to livestock or allow livestock to graze in treated fields.

Cotton: Boll Weevil—Use 1 to 2½ quarts per acre. Bollworm, Cabbage Looper, Lygus Bugs, Stink Bugs, Cotton Leafperforator—Use 2 quarts per acre. Thrips—Use 3 quarts per acre. Do not apply after bolls open. Do not graze meat or dairy animals in treated fields. Do not feed treated plant parts to meat or dairy animals.

Eggplants (1): Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Green Stink Bug, Whitefly—Use 1 quart per acre. Do not exceed 0.5 lbs. active ingredient endosulfan per acre.

Grapes (7): Grape Leafhopper—Use 1 quart per 100 gallons of water or 2 to 3 quarts per acre. Rose Chafer—Use 1 quart per 100 gallons of water. Do not apply to Concord variety as severe injury is likely to occur. Ground application equipment preferred.

**Kale (21):** Cabbage Flea Beetle, Imported Cabbageworm, Harlequin Bug—Use 1½ quarts per acre. Apply only once during growing season.

**Lettuce (14):** Cabbage Looper, Diamondback Moth Larvae, Green Peach Aphid, Imported Cabbageworm—Use 2 quarts per acre. On Head Lettuce do not make more than 3 applications after thinning. Remove outside leaves at harvest. Do not feed crop refuse to livestock. On Leaf Lettuce do not make more than 2 applications per season.

**Macadamia Nuts (0):** Southern Green Stink Bug—Use 2 quarts per 100 gallons. Do not graze livestock on orchard crops or grasses in treated areas.

**Melons (0), Cucumbers (0), Squash (Summer-Winter) (0):** Aphids, Cucumber Beetles, Striped Cabbage Flea Beetle, Striped Flea Beetle, Melonworm, Pickleworm, Squash Bug, Squash Beetle, Rindworm (watermelon), Squash Vine Borer—Use 1 to 2 quarts per acre. For Squash Vine Borer control, apply weekly to flower buds, stems and vines beginning when moths first appear. Melons only: Cabbage Looper, Omnivorous Leafroller—Use 2 quarts per acre.

**Mustard Greens (21), Turnip Greens (21):** Aphids, Cabbage Looper, Imported Cabbageworm—Use 3 pints per acre. Do not make more than 1 application. Do not apply to turnips grown for roots.

**Peaches:** Black Cherry Aphid, Black Peach Aphid, Catfacing Insects, Green Peach Aphid, Peach Twig Borer, Rusty Plum Aphid—Use 1 quart per 100 gallons of water or 4 to 5 quarts per acre. Peach Silver Mite—Use 1 pint per 100 gallons of water or 4 to 5 quarts per acre. Do not make more than 2 applications during the fruiting period. Do not apply within 30 days of harvest. Peachtree Borer—Use 3 pints per 100 gallons of water (2 pints per 100 gallons of water in Western Areas). Spray all bark areas from ground level to scaffold limbs. Do not apply within 21 days of harvest. Do not feed cull fruits to animals nor allow livestock to graze treated orchards.

**Pears (7):** Apple Rust Mite, Conspicuous Stink Bug—Ground treatment: Use 1 quart per 100 gallons of water; 200 to 400 gallons per acre applied to orchard floor and around trees prior to bloom. Do not graze livestock in treated orchards. Pear Rust Mite—Use 1 quart per 100 gallons or 4 to 5 quarts per acre. Foliar treatment: Use 1 quart per 100 gallons of water or 4 to 5 quarts per acre. Pearleaf Blister Mite—Use 1 to 2 pints per 100 gallons of water applied as a post-harvest or dormant treatment. Do not make more than 2 applications during the fruiting period. (21): Pear Psylla—Use 5 quarts in sufficient water to treat 1 acre. (Minimums of 10 gallons per acre for aerial application, 40 gallons per acre for semi-concentrate and 300 gallons per acre for dilute). Apply when adults are first observed or nymphs are small and repeat to maintain control. Do not apply more than five times during the fruiting period. If no more than two applications are made during the fruiting period, may be applied within 7 days of harvest. To control second generation Pear Psylla apply 3 pints per 100 gallons of water, not to exceed 330 gallons of spray per acre. Apply when nymphs are still small and repeat if necessary in 7 to 10 days. Do not apply more than 2 applications during the fruiting season. Note: Aerial application does not result in satisfactory control and should only be employed if impossible to apply by ground. Do not feed cull fruits to animals nor allow livestock to graze treated orchards.

**Peas, Garden (Grown for Seed Only):** Pea Aphid, Pea Weevil—2 to 3 pints per acre. Do not exceed 2 applications during the fruiting period. Use only on peas to be harvested by combine. Do not feed treated vines to livestock or allow livestock to graze in treated fields.

**Peas, Garden (Succulent) Northwest Only (5):** Pea Aphid, Pea Weevil—Use 2 quarts per acre. Do not apply more than twice. Use only on peas to be harvested by combine. Do not feed treated vines to livestock or allow livestock to graze in treated fields.

**Peas, Southern Field (Succulent type, including Black-eyed Peas, Crowder Peas, and Southern Peas) (3):** Cowpea Curculio—Use 1 to 2 quarts per acre. Make 3 applications at 5 day intervals starting when pods are ½ inch long. Do not feed treated threshings to livestock or allow livestock to graze in treated fields.

**Pecans:** Black Pecan Aphid—Use 3 pints per 100 gallons. Do not apply after shuck split. Do not graze meat or dairy animals in treated groves. Do not graze livestock on orchard crops or grasses in treated areas.

**Peppers:** Green Peach Aphid, Flea Beetles, Hornworms, Pepper Maggot—Use 1 to 2 quarts per acre. May be applied within 1 day of harvest at the 1 quart per acre rate. At a rate exceeding 1 quart, do not apply within 4 days of harvest.

**Pineapples (7):** For fresh market only—Pineapple Fruit Mite—Use 1 gallon per acre. Apply at intervals of 7 to 10 days if necessary, particularly during the 40-day period of blooming. Do not make more than 4 applications. Do not feed treated forage or pineapple by-products to livestock.

**Plums (7), Prunes (7):** Fruittree Leafroller (Pacific Northwest Only)—Use 1 quart per 100 gallons. Apply during pre-pink stage of growth. Hop Aphid, Leaf Curl Plum Aphid, Peach Twig Borer, Plum Nursery Mite, Thistle Aphid, Thistle Plum—Use 1 quart per 100 gallons or 4 to 5 quarts per acre. For aphids, apply when eggs hatch during prebloom or petal fall. Summer applications should be made before leaves curl. Lesser Peachtree Borer—Use 3 pints per 100 gallons or 4 to 5 quarts per acre. Apply spray to thoroughly wet trunks and main branches. Peachtree Borer—Use 3 pints per 100 gallons. (2 to 3 pints in Western areas). Spray

thoroughly to cover all bark areas from ground to scaffold limbs. Do not use more than 5 quarts per acre. Do not apply within 21 days of harvest. (See under Cherries for nursery stock dip treatment for Peachtree Borer). Do not feed cull fruits to animals nor allow livestock to graze treated orchards.

**Potatoes (0):** Aphids, Armyworms, Colorado Potato Beetles, Green Stink Bug, Leaf-footed Bug, Plant Bugs, Potato Flea Beetle, Potato Leafhopper, Potato Tuberworm, Whitefly—Use 1 to 2 quarts per acre. European Corn Borer, Potato Psyllid—Use 3 to 4 pints per acre. False Chinch Bug—Use 2 quarts per acre. Threelined Potato Beetle—Use 1 quart per acre.

**Pumpkins (1):** Aphids—Use 1 quart per acre. Cucumber Beetles, Squash Vine Borer—Use 1-2 quarts per acre. For Squash Vine Borer, apply weekly to flower buds, stems, and vines beginning when moths first appear.

**Safflower:** Green Peach Aphid—Use 2 quarts per acre. Do not apply after flower heads open.

**Spinach (21):** Green Peach Aphid, Crown Mite—Use 1½ quarts per acre. Apply only once during growing season.

**Strawberries (4):** Cyclamen Mite—Use 1 quart per 100 gallons. Apply 800 gallons per acre on West Coast; 400 gallons per acre in other areas. Do not reapply within 35 days when fruit is present. Meadow Spittlebug, Strawberry Aphid—Use 1 quart per 100 gallons or 2 quarts per acre. Apply a minimum of 150 gallons of water per acre. Tarnished Plant Bug—Use 1 quart per 100 gallons or 2 quarts per acre. Apply a minimum of 150 gallons of water per acre. Do not reapply within 15 days or more than twice within a 35-day period when fruit is present. Garden Symphylan—(Northwest Only—also in reducing damage)—Use 2 quarts per 100 gallons plant dip. Mix thoroughly. Dip entire plant. When emersing bundles of plants, make certain any trapped air is forced out to assure thorough wetting of the entire plant. Drain and allow plants to dry before setting them out in the field. Wear rubber gloves during dipping operation.

**Sugar Beets (0):** Green Peach Aphid—Use 1 to 2 quarts per acre. Meadow Spittlebug—Use 1 quart per acre. Sugar-Beet Webworm—Use 3 to 4 pints per acre. Do not feed sugar-beet tops to livestock.

**Sunflower (0):** Sunflower Moth—Use 2 quarts per acre. Do not make more than 3 applications. Make first application at onset of bloom and make two more applications at 4 to 7 day intervals. Do not feed treated forage to livestock.

**Sweet Potato (South-Central States Only):** Banded Cucumber Beetle Larvae (aids in the control of)—Use 2 to 4 quarts per acre broadcast, or ⅔ to 1½ quarts per acre on a 16 inch band over the row (48 inch row spacing). Work into the soil to a depth of approximately 3 inches. Treatment should be made just prior to plant set. Do not feed treated potatoes to livestock.

**Tobacco (5):** Budworm, Cabbage Looper, Flea Beetle, Green Peach Aphid, Hornworm—Seed Bed: Use 1 quart per 100 gallons. Apply about 6 gallons per 100 square yards. Field: Use 1 to 2 quarts per acre. Apply in sufficient water for uniform coverage. Stink Bugs—Use 2 to 3 quarts per 100 gallons. Plant Bed: Green June Bug Larvae—Use 1 pint per 100 gallons, drenching at rate of 1 gallon per square yard.

**Tomatoes (Field and Greenhouse) (1):** Blister Beetles, Colorado Potato Beetle, Flea Beetles, Green Peach Aphid—Use 1 quart per acre. Cabbage Looper—Use 3 pints per acre. Stink Bugs—Use 3 to 4 pints per acre. Tomato Fruitworm, Tomato Russet Mite, Yellowstriped Armyworm—Use 2 quarts per acre. Tomato Hornworm, Webworm (Calif.)—Use 1 to 2 quarts per acre. Whitefly—Use 1 quart per 100 gallons of water using 100 to 200 gallons finished spray per acre.

**Walnuts:** To control Walnut Aphid—Use 3-4 quarts per acre. (Apply in a minimum of 150 gallons of water per acre.) Do not apply after husk split. Do not graze livestock on orchard crops or grasses in treated areas.

## Commercially Grown Ornamentals

### Ornamental Plants

**Leatherleaf Fern (Leather Holly Fern):** Leatherleaf Fern Borer—Use 1 quart per 100 gallons. Begin treatment when first larval feeding is observed in the mid-vein area at the base of the leaflets. Repeat at intervals of 2 to 3 weeks as necessary to maintain control.

**Ornamentals (Greenhouse and Outdoors):** Aphids, Cyclamen Mite, Rose Chaler, Whitefly—Use 1 quart per 100 gallons of water. On chrysanthemums, best results will be obtained if applied before plants flower. Do not use on White Birch Trees. Do not apply to "Bonnafon Deluxe," "Fred Shoemith" and "White Knight" chrysanthemums as injury may result.

### Ornamental Trees and Shrubs

**Dogwood, Lilac:** Dogwood Borer, Lilac Borer—Use 1 to 2 quarts per 100 gallons. Apply in early June and repeat in 10 to 14 days. Drench all bark areas down to ground level.

6 3 9

**Douglas Fir (Grown for Ornamentals) Pacific Northwest Only:** Cooley Spruce Gall Aphid, Douglas Fir Needle Midge—Use 1 quart per 100 gallons or 2 teaspoonfuls per gallon. To control Gall Aphid—Apply when white cottony tufts appear. To control Needle Midge—Apply in late April or early May just before buds open.

**Elm:** Aphids—Use 1 quart per 100 gallons. Elm Leaf Beetle (New England Area Only)—Use 2 quarts per 100 gallons. Apply when about 50% of eggs have hatched. Repeat as needed.

**Pines (Austrian, Jack, Red, Scotch, White):** Zimmerman Pine Moth—Use 3 pints per 100 gallons. Applications should be made in mid-April and, if necessary, in late fall. Spray with enough pressure to thoroughly wet bark and main stem, especially where branches join main stem.

**Spruce (New England Area Only):** Spruce Gall Aphid—Use 1 quart per 100 gallons. Apply in late April or early May when aphids are present but before galls are formed.

**Taxus:** Taxus Bud Mite—Use 1 quart per 100 gallons. Make 3 to 5 applications as required beginning in mid-May. A thorough treatment of foliage, twigs and bark is essential. Black Vine Weevil—Use 2 quarts per 100 gallons. Spray thoroughly and drench surface of soil under plants. Apply when weevils first appear, repeat in 14 days.

**BEST AVAILABLE COPY**

**Dealers Should Sell in Original Packages Only.**

**Terms of Sale or Use:** On purchase of this product buyer and user agree to the following conditions:

**Warranty:** FMC makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

**Directions and Recommendations:** Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller and are assumed by the buyer at his own risk.

**Use of Product:** FMC's recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

**Damages:** Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.

JUL 15 1993

CALIFORNIA SUPPLEMENTAL LABEL  
PROCEDURES FOR REDUCING RISK OF CONTAMINATION  
AQUATIC ECOSYSTEMS

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

279-2659

FOR CROP USES LISTED ON THE PRODUCT LABEL

Endosulfan may be a source of contamination in aquatic ecosystems as a result of run-off from agricultural land due to discharge of irrigation water or during periods of heavy rainfall.

To minimize the chance of aquatic impact, the following conditions must be met to allow endosulfan applications:

DIRECTIONS FOR USE (General)

IN ADDITION TO SPECIFIC INSTRUCTIONS UNDER DIRECTIONS FOR USE ON THE PRINCIPAL LABELS, THE FOLLOWING CONDITIONS MUST ALSO BE FOLLOWED FOR USE IN CALIFORNIA:

1. Do not apply this product to fields during irrigation or for 72 hours following an irrigation.
2. Do not apply this product through any type of irrigation system.
3. Do not apply more than 1.5 lbs. a.i./acre/application or more than 3.0 lbs. a.i./acre/season. (Orchard crops and strawberries exempted on rate/acre/application restriction.)
4. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark.
5. Do not apply by ground or air within a distance of 300 feet to natural bodies of water including lakes, ponds, streams and estuaries.

FOR DRIFT CONTROL

1. All application equipment should be properly maintained and calibrated using appropriate carriers.
2. Do not make aerial or ground applications during temperature inversions.
3. Make aerial or ground applications when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 10 mph. Do not discharge at a height of more than 10 feet above

the crop or target.

- 4. For aerial application a positive shutoff system shall be in place to control flow of liquid to spray nozzles as follows: each individual nozzle shall be equipped with a check valve and the flow controlled by a suckback device or a boom pressure release device; or each nozzle shall be equipped with a positive action valve.
- 5. For aerial applications, the spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip or rotor vortices. The working boom length must not exceed 75 percent of wing span or rotor diameter.
- 6. Aircraft boom pressure shall not exceed 40 pounds per square inch.
- 7. Aircraft nozzles shall be equipped with orifices directed backward parallel to the horizontal axis of the aircraft in flight.
- 8. Aircraft nozzles shall not be equipped with any device or mechanism which would cause a sheet, cone, fan, or similar type dispersion of the discharged material except as otherwise provided.
- 9. Fixed wing aircraft and helicopters operating in excess of 60 mph shall be equipped with jet nozzles having an orifice not less than 1/16 inch in diameter (D-4 or larger).
- 10. Helicopters operating at 60 mph or less shall be equipped with nozzles having an orifice not less than 1/16 inch in diameter. A number 46 or equivalent whirlplate may be used.
- 11. For ground applications, equipment other than handguns shall be equipped with nozzles having an orifice not less than 1/16 inch in diameter or larger. Boom nozzles shall be operated at a boom pressure not to exceed 30 pounds per square inch.

**ACCEPTABLE SITES FOR ENDOSULFAN APPLICATION**

- 1. **FIELDS, WITH NO DRAINS, HAVING CONTAINMENT THROUGH BERMS (able to hold irrigation water and normal rainwater), LEVEES AND NON-DRAINING CIRCULATION SYSTEMS.**
- 2. **FIELDS WITH DRAINS, BUT DRAINAGE FLOWS TO SUMP, FARM POND, EVAPORATION POND OR RECIRCULATION SYSTEM WITHOUT DRAINAGE (uncontrollable overflow acceptable, e.g., 10 or 100 year flood). Only grower maintained recirculation systems without drainage are acceptable.**

3. FIELDS WITH SURFACE DRAINS THAT NATURALLY FLOW ONTO PASTURELAND OR FALLOW FIELDS THAT HAVE NO CHanneLED DRAINAGE AND ARE AT LEAST 300 FEET LONG.

**UNACCEPTABLE SITES FOR ENDOSULFAN APPLICATION**

1. FIELDS DRAINING DIRECTLY INTO SURFACE WATERS SUCH AS STREAMS, RIVERS, LAKES, PONDS, MARSHES, BAYS, ESTUARIES, OR THE OCEAN.
2. FIELDS DRAINING INTO SURFACE DRAINAGE DITCHES OR CANALS THAT FLOW DIRECTLY INTO SURFACE WATERS SUCH AS STREAMS, RIVERS, LAKES, PONDS, MARSHES, BAYS, ESTUARIES, OR THE OCEAN.
3. ANY AND ALL FIELDS WITH SURFACE DRAINAGE PATTERNS IN THE MOSS LANDING DRAINAGE SYSTEM HAVING MAIN ARTERIES THAT DRAIN INTO THE ELKHORN SLOUGH (northern portion of Monterey County).
4. ANY AND ALL FIELDS WITH DRAINAGE PATTERNS IN THE SAN DIEGO CREEK DRAINAGE SYSTEM HAVING MAIN ARTERIES THAT DRAIN INTO NEWPORT BAY.

ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE EPA REGISTERED LABEL ARE TO BE FOLLOWED.

THIS LABELING MUST BE IN THE POSSESSION OF THE USER AT THE TIME OF PESTICIDE APPLICATION.