

MAR - 6 1995

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

Dear Ms. Hilton:

Subject: Amendment - Re-add Succulent Peas,
Add Whitefly/Cotton,
Add Russian Wheat Aphid/small grains

Thiodan 3 EC

EPA Reg. No. 279-2924

Your submission dated December 21, 1993

The amendments referred to above, submitted in connection with registration under FIFRA section 3(c)(7)(a), are acceptable provided that you:

1. Submit and/or cite all data or other material required for registration/reregistration of your product under FIFRA section 3(c)(5) or FIFRA section 4 when the Agency requires all registrants of similar products to submit such data.
2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling [Note: these comments reflect review of the subject label submission in conjunction with your latest labeling, accepted November 7, 1994 which included WPS - labeling revised in accordance with this letter should be based on the labeling accepted November 7, 1994]:
 - a) In the ingredients statement, revise ACTIVE INGREDIENTS to read ACTIVE INGREDIENT, since there is only one. Be sure to include only a double asterisk after INERT INGREDIENTS.
 - b) Revise the **Statement of Practical Treatment** to read as follows (retain the Note to Physician in its present form):

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 touching back of throat with a finger or by giving one (1) ounce of syrup of ipecac, if available. If person is unconscious or convulsing, do not give anything by mouth and do not induce vomiting.

If inhaled: Remove victim to fresh air. Apply artificial respiration if indicated. Get medical attention.

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.

- d) Revise the text of the **HAZARDS TO HUMANS AND DOMESTIC ANIMALS** to read as follows (this product is in Toxicity Category I for eye irritation - corneal opacity):

Fatal if swallowed. Corrosive. Causes irreversible eye damage. Do not get in eyes, on skin, or on clothing. May be fatal if inhaled or absorbed through skin. Do not breathe vapor or spray mist. Do not contaminate food or feed. Keep out of reach of domestic animals. Food utensils such as teaspoons or measuring cups must not be used for food purposes after use in measuring pesticides.

- e) Under the heading **Applicators and other handlers must wear**, revise "Barrier Laminate or Viton" to read "barrier laminate or Viton >14 mils". Also, change the order of the PPE listing such that the PPE for cleaning equipment, mixing, or loading appears as the last item (i.e., after the respirator requirement) and revise that entry to read:

Add a chemical-resistant apron when cleaning equipment, mixing, or loading.

- f) Delete the referral to the California supplemental label since California does not accept this full Federal label for use in California (you will be submitting an application for a separate California only label based on the CDPR May 4, 1994 acceptance of a customized Thiodan 3EC label). An added front panel limitation for the non-California labeling would be appropriate, such as "This product is not intended [registered] for use in California. For California use FMC's Thiodan 3EC - California [or FMC's

Thiodan 3EC For Use in California, or whatever name you give your California only product]. You may choose to repeat this limitation directly above **GENERAL INSTRUCTIONS** where the California supplemental labeling referral now occurs.

- g) In the **GENERAL INSTRUCTIONS**, revise the sixth sentence to read: "For ground application, apply recommended amount of pesticide in a minimum of 10 gallons of water per acre on vegetable or row crops, unless otherwise noted.
- h) It would appear that the directions for control of Peachtree Borer and Lesser Peachtree Borer as they appear for the crops **Apricots, Nectarine, and Peaches** would also be appropriate for control of these same pests on **Cherries** and on **Plums, Prunes**. Therefore, unless your agricultural experts disagree (and can submit written justification), the **Method of Application** for these pests on all pertinent crops should read:

Best control is obtained with a single application post-harvest during the first week of September. Spray all bark areas from ground level to lower scaffold limbs.

- i) For **Cherry, Peach, Plum Nursery Stock Dip**, be sure that the Note "Wear rubber gloves during the dipping operation." does NOT appear for this crop entry, since the WPS PPE requirements supersede this.
- j) The **Rate of Application** for control of Whitefly on **Cotton** must be revised to 1 1/3 quarts per acre. Your earlier applications (including the December , 1993 label) had shown the correct rate, but the label version accepted November 7, 1994 contained an incorrect rate of 1 1/2 quarts (more than the intended 1 lb. active/per acre) which was not caught by the reviewer at that time.
- k) For **Strawberries-Northwest Use Only**, delete the Note "Wear rubber gloves during the dipping operation.", since the WPS PPE requirements supersede this.
- l) The Agency does not understand why the crop entry which had previously appeared as **Peas (Succulent)** now appears as **Succulent Peas**. The original listing would appear to be more useful to product users who would be looking for permitted applications to various types of peas, since **Peas (Succulent)** would appear next to **Peas (Seed Crop Only)**.

- m) For **Tomatoes**, delete the pest name "Webworms (California only)". This pest will appear on the California only label.
- n) Since alternate rates in teaspoons per gallon are given for each of the crop listings under the heading **Ornamental Trees and Shrubs**, it would seem appropriate to give such a rate (1 1/3 teaspoons per gallon of water) for **LEATHERLEAF FERN** and **ORNAMENTALS (Greenhouse and Out-of Doors)**. If a rate in teaspoons is added, then add "Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides." as the first item in the Notes for these crops.

A stamped copy of the label is enclosed for your records.

- 3) Submit three (3) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Regarding the labeling for use in California only, as we have discussed by telephone, because the California only label now contains different directions for use (including use patterns, rates, and pre-harvest intervals) than those on the full Federal label, and since California apparently would not accept your attempt at a label combining the all states, the except in California, and the California only crop listings, and the Agency cannot accept this label as a part or subset of EPA. Reg. No. 279-2924. It will be necessary for you to file an application for a separate registration for the California only label (with its own product name). Data supporting EPA Reg. No. 279-2924 can, of course, be cited to support this product (be sure to get the MRID numbers correct since some of the cited data was produced by another registrant). Presumably the agreement you have with the other members of the endosulfan data producers consortium will cover this new product, but please request from the data producer an authorization letter to cite the same product toxicology data which supported Thiodan 3EC. The CSF for the new product will be the same as the last CSF for Thiodan 3EC.

When preparing the draft labeling for the California only product application, all pertinent comments above for the full Federal label should be incorporated. In addition, the following revisions should be made to the "California labeling" submitted September 22, 1994:

5916

- a) Revise the referral to the California Supplemental label from "See supplemental label for DIRECTIONS FOR USE IN CALIFORNIA" (since the entire label will contain directions for use in California for each specific crop) to read: **See CALIFORNIA SUPPLEMENTAL LABEL for required procedures for reducing risk of contamination of aquatic ecosystems.**
- b) For the crops **Barley, Oats, Rye, Wheat**, delete the directions for **Cereal Leaf Beetle (Illinois, Indiana, Michigan, and Ohio only)**.
- c) For the crop **Cherries**, delete the directions for **Michigan only: Mineola Moth**.
- d) For **Cherry, Peach, Plum Nursery Stock Dip** and for **Strawberries-Northwest Use Only**, delete the Note "Wear rubber gloves during the dipping operation.", since the WPS PPE requirements supersede this.
- e) For **Pecans**, revise the **Rate of Application** to read to 1 quart per 100 gallons.
- f) Under the heading **Ornamental Trees and Shrubs**, delete the entry for **Spruce (New England Only)**.
- g) Presumably, the several entries limited to "Pacific Northwest only" would still be pertinent, assuming northern California is included in this category and the listed crops are grown in that area.
- h) Since alternate rates in teaspoons per gallon are given for each of the crop listings under the heading **Ornamental Trees and Shrubs**, it would seem appropriate to give such a rate (1 1/3 teaspoons per gallon of water) for **ORNAMENTALS (Greenhouse and Out-of Doors)**. If a rate in teaspoons is added, then add "Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides." as the first item in the Notes for this crop.
- i) For the entries **Douglas Fir** and **Shade Trees**, revise the first Note to read "Food utensils such as teaspoons", since the rate is given in teaspoons.

Sincerely,

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

6916

Code 3212

Net Contents

Thiodan® 3 E.C. Insecticide

For Agricultural or Commercial Use Only.

EPA Reg. No. 279-2924

EPA Est. 279-

Active Ingredients:	By Wt.
*Endosulfan: (Hexachlorohexahydromethano-2,4,3-benzodioxathiepin 3-oxide)	33.7%
Inert Ingredients:***	66.3%
	100.0%

*Thiodan

**Contains Xylene Range Aromatic Solvents.

Thiodan 3 E.C. contains 3 pounds of endosulfan per gallon.

KEEP OUT OF REACH OF CHILDREN



PELIGRO

See Other Panels for Additional Precautionary Information.

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta 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 ipacac, if available, or by touching the back of the throat with 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.

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

Note to Physicians: 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.

For Emergency Assistance Call (800) 331-3148.

ACCEPTED
with COMMENTS
in EPA Letter Dated

MAR - 6 1995



FMC Corporation
Agricultural Chemical Group
Philadelphia PA 19103

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

279-2924

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PRECAUTIONARY STATEMENTS

Hazards to Humans (and Domestic Animals)

Danger

Fatal if swallowed. May be fatal if inhaled or absorbed through the skin. Do not breath vapors or spray mist. Causes eye damage. 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 provision 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 smoking or eating. Remove contaminated clothing and wash with soap and hot water 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, to areas where surface water is present or to intertidal areas below the mean high water mark. Due to the 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 or 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, pour, spill 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.

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:

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.

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STORAGE AND DISPOSAL

Pesticide Storage

Do not store in or around the home.

Do not store below 20°F, (- 12°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 (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 of 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. Do not cut or weld metal containers.

Returnable/Refillable Sealed Containers

Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

See supplemental label for directions for use in California.

GENERAL INSTRUCTIONS

Not For Use Or Storage In Or Around The Home.

Do not use in undiluted form.

Apply the listed amount per acre when insects first appear and repeat as required, unless otherwise noted, to maintain effective control. Use in sufficient water for thorough coverage of listed crops, unless otherwise noted. 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 of 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 of this material are recommended, mix with sufficient water to provide a minimum of finished spray equal to twice the amount of Thiodane 3 E.C. 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.

Alfalfa (Grown for Forage) (21)

Insects Controlled	Rate of Application	Method of Application
Meadow Spittlebug	2/3 pint per acre	Apply one week after eggs begin to hatch or when first small masses of froth are produced in the crowns of the plant which is usually about the time the alfalfa is 4 to 6 inches tall. Apply in a minimum of 10 gallons of water per acre by ground or 2 gallons of water per acre by air.

Do not graze or cut forage within 21 days of treatment.
Do not apply more than once per cutting.
Do not make more than 3 applications per year.
Do not exceed a maximum of 0.75 lb. active ingredient (i.e., 1 quart) per acre per year.

Apples (21)

Insects Controlled	Rate of Application	Method of Application
Aphids (including Apple Aphid, Rosy Apple Aphid, Woolly Apple Aphid) Apple Rust Mite Green Fruitworm Tarnished Plant Bug Tentiform Leafminers White Apple Leafhopper (first generation)	2/3 quart per 100 gallons or a maximum of 3 1/2 quarts per acre	Applications made at pink and/or petal fall provide best control of Tarnished Plant Bug and Green Fruitworm. For best control of first generation White Apple Leafhopper, apply when nymphs first appear on leaves. If necessary, prior to petal fall, use 1 quart per 100 gallons to control Apple Aphids and Rosy Apple Aphids. For control of Tentiform Leafminers, make first application as soon as moth flight begins. A second application should be made 10 days later.

Do not feed pomace from treated apples to livestock.
Do not feed cull fruits to animals or allow livestock to graze in treated orchards.
Do not make more than 2 applications during the fruiting period.
Do not make more than 3 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Apricots (21), Nectarines (21), Peaches (21)

Insects Controlled	Rate of Application	Method of Application
Peachtree Borer Lesser Peachtree Borer	1 quart per 100 gallons; West Coast—2/3 to 1 quart per 100 gallons; South-eastern States—2 to 3 1/2 quarts per 100 gals.	Best control is obtained with a single application post-harvest during the first week of September. Spray all bark areas from ground level to lower scaffold limbs

Do not feed cull fruits to animals or allow livestock to graze in treated orchards.
Do not make more than 2 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Apricots (30), Nectarines (30), Peaches (30)

Insects Controlled	Rate of Application	Method of Application
Aphids (including Black Cherry Aphid, Black Peach Aphid, Green Peach Aphid, Rusty Plum Aphid) Cattacing insects (Stink Bug type) Green Fruitworm Peach Silver Mite Peach Twig Borer	2/3 quart per 100 gallons or a maximum of 3 1/2 quarts per acre; West Coast—do not use more than 4 quarts per acre	Make applications when insects appear or feeding is noticed.

Do not feed cull fruits to animals or allow livestock to graze in treated orchards.
Do not make more than 2 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Artichokes (7)

Insects Controlled	Rate of Application	Method of Application
Aphids (including Artichoke Aphid, Green Peach Aphid)	1 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed. Apply in a minimum of 20 gallons of water per acre by ground and in a minimum of 10 gallons of water per acre by air.
Artichoke Plume Moth Whitefly	1 1/2 quarts per acre	

Do not make more than 2 applications per year.
Do not exceed a maximum of 2.0 lbs. active ingredient (i.e., 2 1/2 quarts) per acre per year.

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Barley, Oats, Rye, Wheat

Insects Controlled	Rate of Application	Method of Application
Army Cutworm	2/3 quart per acre	For aerial application, apply in 2 gallons of diesel fuel oil per acre.
Cereal Leaf Beetle (Illinois, Indiana, Michigan and Ohio only)	1/2 to 2/3 quart per acre	Apply when small larvae are readily found in the field. For aerial application, use a minimum of 1 to 2 gallons of water per acre.
Aphids (Including Russian Wheat Aphid)	2/3 to 1 quart per acre	Make applications when insects appear or feeding is noticed.

Do not apply after heads begin to form.
Do not feed treated forage to livestock.
Do not make more than 2 applications per year.
Do not exceed a maximum of 1.0 lb. active ingredient (i.e., 1 1/2 quarts) per acre per year.

Beans, succulent and Dry (except Lima Beans) (3) and Southern Field Peas (Succulent type, including Black-eyed Peas, Crowder Peas and Southern Peas) (3)

Insects Controlled	Rate of Application	Method of Application
Black Bean Aphid Bean Leaf Skeletonizer Cowpea Curculio Cucumber Beetles Flea Beetles Green Stink Bug Leafhoppers Mexican Bean Beetle	2/3 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed. For control of Cowpea Curculio, make 3 applications at 5-day intervals starting when the pods are 1/2 inch long.
Aphids Armyworms Western Bean Cutworm Whitefly	1 1/2 quarts per acre	

Do not feed treated threshings or allow livestock to graze in treated fields.
Do not use on Lima Beans that are to be removed from the field for processing.
Do not make more than 3 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Blueberries

Insects Controlled	Rate of Application	Method of Application
Blueberry Bud Mite	2 quarts per 300 gallons	Apply immediately after harvest and repeat 6 to 8 weeks later.

Do not apply after buds are well formed.
Do not make more than 2 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Broccoli (7), Brussel Sprouts (14), Cabbage (7), Cauliflower (14)

Insects Controlled	Rate of Application	Method of Application
Cabbage Aphid Cabbage Looper Cross-striped Cabbage-worm Diamondback Moth larvae Flea Beetles harlequin Bug Imported Cabbageworm Leafhoppers Stink Bugs	1 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Armyworms Cutworms Whitefly	1 1/2 quarts per acre	

Do not make more than 4 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Carrots (7)

Insects Controlled	Rate of Application	Method of Application
Green Peach Aphid Leafhoppers	2/3 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Armyworms Flea Beetles Whitefly	1 1/2 quarts per acre	

Do not use tops for food or feed.
Do not make more than one application per year.
Do not exceed a maximum of 1.0 lbs. active ingredient (i.e., 1 1/2 quarts) per acre per year.

Celery (4)

Insects Controlled	Rate of Application	Method of Application
Green Peach Aphid Cabbage Looper Leafhoppers	2/3 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Armyworms Flea Beetles Whitefly	1 1/2 quarts per acre	

Do not make more than one application per year.
Do not exceed a maximum of 1.0 lbs. active ingredient (i.e., 1 1/2 quarts) per acre per year.

Celery (7)

Insects Controlled	Rate of Application	Method of Application
Green Peach Aphid	2/3 quart per acre	Make applications when insects appear or feeding is noticed.

Do not make more than 2 applications per year.
Do not exceed a maximum of 1.0 lb. active ingredient (i.e., 1 1/2 quarts) per acre per year.

Cherries (21)

Peachtree Borer Lesser Peachtree Borer	1 quart per 100 gallons; West Coast: 2/3 to 1 quart per 100 gallons	Thoroughly wet all bark from ground to scaffold limbs.
Black Cherry Aphid Green Fruitworm Plum Rust (Nursery) Mite	2/3 quart per 100 gallons or 2 2/3 to 3 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
<i>Pacific Northwest only:</i> Eyespotted Bud Moth Fruittree Leafroller		For Bud Moth control, apply at "popcorn" stage. For Leafroller control, apply during pre-pink stage of growth.
<i>Michigan only:</i> Mineola Moth	1 1/2 quarts per 100 gallons	Apply in the delayed dormant period.

Do not feed cull fruits to animals or allow livestock to graze in treated orchards.
Do not make more than 2 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Cherry, Peach, Plum Nursery Stock Dip

Insects Controlled	Rate of Application	Method of Application
Peachtree Borer	2 2/3 quarts per 40 gallons	Mix thoroughly. Immerse trees so that the roots and crowns are covered well above the grafting bud scar.

Wear rubber gloves during the dipping operation.
Plant immediately or dry before returning stock to storage.

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Citrus (Non-Bearing Trees and Nursery Stock)

Insects Controlled	Rate of Application	Method of Application
Citrus Aphid	3/4 quart per 100 gallons or a maximum of 3 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.

Do not apply to bearing trees or trees that will bear fruit within twelve months.
 Do not make more than 2 applications per year.
 Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Collards (21)

Insects Controlled	Rate of Application	Method of Application
Aphids Cabbage Looper Diamondback Moth larvae Fall Armyworm Flea Beetles Harlequin Bug Imported Cabbageworm Leafhoppers	1 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Whitefly	1 1/2 quarts per acre	

Do not make more than one applications per year.
 Do not exceed a maximum of 1.0 lb. active ingredient (i.e., 1 1/2 quarts) per acre per year.

Cotton

Insects Controlled	Rate of Application	Method of Application
Aphids	1/2 to 1 quart per acre	Make applications when insects appear or feeding is noticed. For control of aphids, thorough coverage is important.
Boll Weevil	3/4 to 2 quarts per acre	
Bollworm Cabbage Looper Cotton Leafperforator Cotton Leafworm Fleahoppers Lygus Bugs Stink Bugs Tobacco Budworm	1 1/2 to 2 quarts per acre	
Thrips	2 quarts per acre	
W. fly	1 1/2 quarts per acre	

Applications may be made using ground or aerial application equipment. The higher rate should be used under heavy pest pressure.
 Do not apply after bolls open.
 Do not graze dairy or meat animals in treated fields.
 Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Cucumbers (2), Melons (2), Pumpkins (2), Summer and Winter Squash (2)

Insects Controlled	Rate of Application	Method of Application
Aphids Cucumber Beetles Melonworm Pickworm Rindworm (on watermelons) Squash Beetle Squash Bug Squash Vine Borer Striped Flea Beetle	3/4 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed. For Squash Vine Borer control, apply weekly to flower buds, stems, and vines beginning when moths first appear.
Cabbage Looper Omnivorous Leafroller Whitefly	1 1/2 quarts per acre	

Do not make more than 6 applications per year.
 Do not exceed a maximum of 3.0 lb. active ingredient (i.e., 4 quarts) per acre per year.

Eggplant (1)

Insects Controlled	Rate of Application	Method of Application
Blister Beetle Colorado Potato Beetle Flea Beetles Green Peach Aphid Green Stink Bug	3/4 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Whitefly	1 1/2 quarts per acre	

Do not make more than 2 applications per year.
 Do not exceed a maximum of 1.0 lbs. active ingredient (i.e., 1 1/2 quarts) per acre per year.

Grapes (7)

Insects Controlled	Rate of Application	Method of Application
Grape Leafhopper Grape Phylloxera (leaf form) Rose Chafer	3/4 quart per 100 gallons or 1 1/2 to 2 quarts per acre	Make applications when insects appear or feeding is noticed.

Do not use on Concord variety as severe injury is likely to occur.
 Ground application is preferred.
 Do not make more than 3 applications per year.
 Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Kale (21)

Insects Controlled	Rate of Application	Method of Application
Cabbage Flea Beetle Harlequin Bug Imported Cabbageworm	1 quart per acre	Make applications when insects appear or feeding is noticed.

Do not make more than one application per year.
 Do not exceed a maximum of .75 lb. active ingredient (i.e., 1 quart) per acre per year.

Lettuce (14)

Insects Controlled	Rate of Application	Method of Application
Cabbage Looper Diamondback Moth larvae Green Peach Aphid Imported Cabbageworm Leafhoppers	1 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Armyworms Whitefly	1 1/2 quarts per acre	

On Head Lettuce: Do not make more than 3 applications after thinning. Remove wrapper leaves at harvest.
On Leaf Lettuce: Do not make more than 2 applications per year.
 Do not feed crop refuse to livestock.
 Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 1 1/2 quarts) per acre per year.

Mustard Greens (21)

Insects Controlled	Rate of Application	Method of Application
Aphids Cabbage Looper Diamondback Moth larvae Fall Armyworm Flea Beetles Harlequin Bug Imported Cabbageworm Leafhoppers	1 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Whitefly	1 1/2 quarts per acre	

Do not make more than one application per year.
 Do not exceed a maximum of 1.0 lb. active ingredient (i.e., 1 1/2 quarts) per acre per year.

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Pears (7)

Insects Controlled	Rate of Application	Method of Application
Green Fruitworm Tarnished Plant Bug	2/3 quart per 100 gallons or 2 2/3 to 3 1/2 quarts per acre	Make applications at white bud or petal fall when insects appear or feeding is noticed.
Pear Psylla	3 1/2 quarts per acre	Apply in a minimum of 10 gallons of water for aerial application or in 300 gallons of water for dilute application. Apply when adults are first observed or nymphs are small and repeat to maintain control.
Pear Rust Mite Conspere Stink Bug (foliar treatment)	2/3 quart per 100 gallons or 2 2/3 to 3 1/2 quarts per acre	Make applications when insects appear or feeding is noticed. Stink Bugs must be wet by spray to obtain control.
Conspere Stink Bug (soil treatment)	2/3 quart per 100 gallons; 200 to 400 gallons per acre	Apply to orchard floor and around trees prior to bloom.
Pear Leaf Blister Mite	1/2 to 2/3 quart per 100 gallons	Apply as a post harvest or dormant treatment.

Do not feed cull fruits to animals or allow livestock to graze in treated orchards.
Do not make more than 2 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.
Note: Aerial application may not result in satisfactory control and should only be employed if impossible to apply by ground.

Peas (Seed Crop Only) (1)

Insects Controlled	Rate of Application	Method of Application
Pea Aphid Pea Weevil	2/3 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.

Use only on peas to be harvested by combine.
Do not feed treated vines or threshings to livestock or allow livestock to graze in treated fields.
Do not make more than 2 applications per year.
Do not exceed a maximum of 1.5 lbs. active ingredient (i.e., 2 quarts) per acre per year.

Pecans

Insects Controlled	Rate of Application	Method of Application
Black Pecan Aphid Pecan Nut Casebearer Spittlebug	1 quart per 100 gallons	Make applications when insects appear or feeding is noticed. For Casebearer, apply when eggs of first generation appear on the tips of the young nuts. Another application may be required after the second generation of eggs is deposited. For Spittlebug, apply when first leaves are half grown and repeat as required.
Pecan Leaf Phylloxera	2/3 to 1 quart per 100 gallons	Apply when nymphs appear and before they are enclosed in plant tissue. For high populations, use the higher rate.

Do not apply after shuck split.
Do not graze livestock on orchard crops or grasses in treated areas.
Do not make more than 2 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Peppers (1)

Insects Controlled	Rate of Application	Method of Application
Flea Beetles Green Peach Aphid Homworms Pepper Maggot	2/3 quart per acre	Make applications when insects appear or feeding is noticed.

Do not make more than 2 applications per year.
Do not exceed a maximum of 1.0 lb. active ingredient (i.e., 1 1/2 quarts) per acre per year.

Peppers (4)

Insects Controlled	Rate of Application	Method of Application
Armyworms Flea Beetles Green Peach Aphid Homworms Leafhoppers Pepper Maggot	2/3 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Whitefly	1 1/2 quarts per acre	

Do not make more than 2 applications per year.
Do not exceed a maximum of 2.0 lbs. active ingredient (i.e., 2 2/3 quarts) per acre per year.

Pineapple (For Fresh Market Only) (7)

Insects Controlled	Rate of Application	Method of Application
Pineapple Fruit Mite	2 to 2 2/3 quarts per acre	Make applications when insects appear or feeding is noticed. Apply at intervals of 7 to 10 days, if necessary, particularly during the 40 day period of blooming.

Do not feed forage or pineapple by-products to livestock.
Do not make more than 2 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Plums (7), Prunes (7)

Insects Controlled	Rate of Application	Method of Application
Fruitree Leafroller (Pacific Northwest Only)	2/3 quart per 100 gallons	Apply during pre-pink stage of growth when insects appear or feeding is noticed.
Aphids (including Hop Aphid, Leafcurl Plum Aphid, Thistle Aphid) Plum Rust (Nursery) Mite	2 2/3 to 3 1/2 quarts per acre	For control of aphids, apply when eggs hatch during pre-bloom or petal fall. Summer applications should be made before leaves curl.
Peach Twig Borer	2/3 quart per 100 gallons or 2 2/3 to 3 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Lesser Peachtree Borer	1 quart per 100 gallons or 2 2/3 to 3 1/2 quarts per acre	Apply spray to thoroughly wet the trunk and main branches.
Peachtree Borer	1 quart per 100 gallons or 2 2/3 to 3 1/2 quarts per acre. West Coast—2/3 to 1 quart per 100 gallons or 2 2/3 to 3 1/2 quarts per acre	Spray thoroughly to cover all bark areas from ground to scaffold limbs.

Do not allow livestock to graze on treated orchard crops or grasses in treated areas.
Do not make more than 2 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Potatoes (1)

Insects Controlled	Rate of Application	Method of Application
Aphids Amyworms Colorado Potato Beetle Green Stink Bug Leaffooted Bug Plant Bugs Potato Flea Beetles Potato Leafhopper Potato Tuberworm Threelined Potato Beetle	3/4 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
European Corn Borer Potato Psyllid	1 to 1 1/2 quarts per acre	
False Chinch Bug Whitefly	1 1/2 quarts per acre	
Do not make more than 6 applications per year. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.		

Safflower

Insects Controlled	Rate of Application	Method of Application
Green Peach Aphid Whitefly	1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Do not apply after flower heads open. Do not make more than 2 applications per year. Do not exceed a maximum of 2.0 lbs. active ingredient (i.e., 2 2/3 quarts) per acre per year.		

Spinach (21)

Insects Controlled	Rate of Application	Method of Application
Amyworms Crown Mite Flea Beetles Green Peach Aphid Leafhoppers	1 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Whitefly	1 1/2 quarts per acre	
Do not make more than one application per year. Do not exceed a maximum of 1.0 lb. active ingredient (i.e., 1 1/2 quarts) per acre per year.		

Strawberries (4)

Insects Controlled	Rate of Application	Method of Application
Meadow Spittlebug Stink Bug Tarnished Plant Bug Whitefly	1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed. Do not reapply within 15 days or more than twice during a 35 day period when fruit is present.
Cyclamen Mite	2 2/3 quarts per acre in 400 gallons	
Do not make more than 3 applications per year. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.		

Strawberries—Northwest Use Only

Insects Controlled	Rate of Application	Method of Application
Garden Symphylan (aids in reducing damage)	1 1/2 quarts per 100 gallons	Mix thoroughly. Dip entire plant. When immersing bundles of plants, make certain any trapped air is forced out to assure thorough wetting of entire plant.
Wear rubber gloves during the dipping operation. Drain and allow plants to dry before setting them out in the field.		

Succulent Peas (5)

Insects Controlled	Rate of Application	Method of Application
Pea Aphid Pea Weevil Loopers Stink Bug Colorado Potato Beetle	3/4 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Use only on peas to be harvested by combine. Do not feed treated vines to livestock or allow to graze in treated fields. Do not make more than 2 applications during the fruiting period. Do not exceed a maximum of 2 lbs. active ingredient (i.e., 2 2/3 quarts) per acre per year.		

Sugar Beets (30)

Insects Controlled	Rate of Application	Method of Application
Green Peach Aphid Meadow Spittlebug	3/4 to 1 1/2 quarts per acre	Make application(s) when insects appear or feeding is noticed. Make one or two applications per year as needed for control.
Sugar Beet Webworm	1 to 1 1/2 quarts per acre	
Whitefly	1 1/2 quarts per acre	
Do not feed treated tops to livestock. Do not make more than 2 applications per year. Do not exceed a maximum of 2.0 lbs. active ingredient (i.e., 2 2/3 quarts) per acre per year.		

Sunflowers (1)

Insects Controlled	Rate of Application	Method of Application
Sunflower Moth	1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed. Make the first application at the onset of bloom. Allow 7 days between repeat applications.
Do not feed treated forage to livestock. Do not make more than 3 applications per year. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.		

Sweet Corn (Fresh Vegetable Use Only) (1)

Insects Controlled	Rate of Application	Method of Application
Corn Leaf Aphid Whitefly	1 1/2 quarts per acre	Apply when silks first appear and continue until they begin to dry. Allow 5 days between applications.
Corn Earworm	2 quarts per acre	
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. Do not make more than 3 applications per year. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.		

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Sweet Potatoes (1)

Insects Controlled	Rate of Application	Method of Application
Sweet Potato Flea Beetle Sweet Potato Weevil	2/3 quart per acre	Make applications when insects appear or feeding is noticed. For flea beetle control, begin applications shortly after transplanting or as soon as flea beetles appear. For Sweet Potato Weevil control, apply in sufficient water for complete coverage. Applications may be made to transplants in the nursery and/or in the field. Repeat applications may be made as necessary. For Sweet Potato Weevil control in a clean up program, apply at a rate of 2 2/3 quarts per acre to the soil under the sweet potato nursery beds and to the area immediately surrounding the nursery beds. Do not place the seed tubers directly on the ground treated with Thiodan®.
Whitefly	1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Banded Cucumber Beetle Larvae (aids in control) (South Central States and Puerto Rico Only)	1 1/2 to 2 2/3 quarts per acre broadcast or 1/2 to 1 quart 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 cull potatoes to livestock or allow livestock to graze in treated fields.
Do not make more than 3 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Tobacco (5)

Insects Controlled	Rate of Application	Method of Application
Aphids (including Green Peach Aphid, Tobacco Aphid) Budworm Cabbage Looper Flea Beetles Homworms	Seed Bed: 2/3 quart per 100 gallons	Make applications when insects appear or feeding is noticed. Apply about 6 gallons of finished spray per 100 square yards.
Green June Bug larvae	Plant Bed: 2/3 pint per 100 gallons	Make applications when insects appear or feeding is noticed. Drench at a rate of 1 gallon per square yard.
Aphids (including Green Peach Aphid, Tobacco Aphid) Budworm Cabbage Looper Flea Beetles Green June Bug larvae Homworms	Field: 2/3 to 1 1/2 quarts per acre	Make applications when insect activity or feeding is noticed.
Stink Bugs	Field: 2/3 quart per 100 gallons	

Do not make more than 6 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Tomatoes (Field and Greenhouse) (2)

Insects Controlled	Rate of Application	Method of Application
Aphids Blister Beetles Colorado Potato Beetle Flea Beetles Tomato Hornworms Webworm (California Only)	2/3 to 1 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.
Cabbage Looper Stink Bugs	1 to 1 1/2 quarts per acre	
Tomato Fruitworm Tomato Russet Mite Whitefly Yellowstriped Armyworm	1 1/2 quarts per acre	
Whitefly	2/3 quart per 100 to 200 gallons of water	

Do not make more than 6 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Walnuts

Insects Controlled	Rate of Application	Method of Application
Walnut Aphid	2 to 3 1/2 quarts per acre	Make applications when insects appear or feeding is noticed.

Do not apply after husk split.
Do not graze livestock on orchard crops or grasses in treated areas.
Do not make more than 2 applications per year.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

COMMERCIALLY GROWN ORNAMENTALS

Ornamental Plants

Leatherleaf Fern (Leather Holly Fern)

Insects Controlled	Rate of Application	Method of Application
Leatherleaf Fern Borer	2/3 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.

Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Ornamentals (Greenhouse, and Out-of-Doors)

Insects Controlled	Rate of Application	Method of Application
Aphids Cyclamen Mite Rose Chafer Whitefly	2/3 quart per 100 gallons	Make applications when insects appear or feeding is noticed.

On chrysanthemums, best results will be obtained if applied before plants flower.
Do not apply to "Bonafon Deluxe", "Fred Shoemith", and "White Knight" chrysanthemums as injury may result.
Do not use on Birch trees.
Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Ornamental Trees and Shrubs

Dogwood, Lilac

Insects Controlled	Rate of Application	Method of Application
Dogwood Borer Lilac Borer	2/5 to 1 1/2 quarts per 100 gallons (1 1/2-2 3/4 teaspoons per gallon)	Apply in early June and repeat in 10 to 14 days. Drench all bark areas down to the ground level.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

**Douglas Fir for Ornamentals, Nursery Stock or Christmas trees—
Pacific Northwest Only**

Insects Controlled	Rate of Application	Method of Application
Aphids Cooley Spruce Gall Adelgid Douglas Fir Needle Midge	2/5 quart per 100 gallons (1 1/2 teaspoons per gallon)	Make applications when insects appear or feeding is noticed. For control of gall adelgid, apply when white cottony tufts appear. For control of needle midge, apply in late April or early May just before buds open.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Pines (Austrian, Jack, Red, Scotch, White)

Insects Controlled	Rate of Application	Method of Application
Zimmerman Pine Moth	1 quart per 100 gallons (2 teaspoons per gallon)	Apply in mid-April and again, if necessary, in late fall. Thoroughly wet bark and main stem, especially where branches join main stem.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Shade Trees (except Birch), Shrubs

Insects Controlled	Rate of Application	Method of Application
Aphids	2/5 quart per 100 gallons (1 1/2 teaspoons per gallon)	Make applications when insects appear or feeding is noticed.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Spruce (New England Area Only)

Insects Controlled	Rate of Application	Method of Application
Spruce Gall Aphid	2/5 quart per 100 gallons (1 1/2 teaspoons per gallon)	Apply in late April or early May when aphids are present but before galls are formed.

Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

Taxus

Insects Controlled	Rate of Application	Method of Application
Taxus Bud Mite	2/5 quart per 100 gallons (1 1/2 teaspoons per gallon)	Make 3 to 5 applications beginning in mid-May. Thoroughly spray foliage, twigs, and bark.

Black Vine Weevil	1 1/2 quarts per 100 gallons (2 3/4 teaspoons per gallon)	Spray thoroughly and drench the soil under the plants. Apply when the weevils first appear and repeat in 14 days.
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Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3.0 lbs. active ingredient (i.e., 4 quarts) per acre per year.

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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.

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CALIFORNIA SUPPLEMENTAL LABEL

PROCEDURES FOR REDUCING RISK OF CONTAMINATION OF
AQUATIC ECOSYSTEMS

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 INSTRUCTION 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.

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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.

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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.