



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

Anne Stout
GOWAN COMPANY
BOX 5569
YUMA, AZ 85366

JAN 14 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 08/02/93 in Response to PR Notice 93-7
EPA REG. NO. 10163-130
GOWAN ENDOSULFAN 50 WSB

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



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

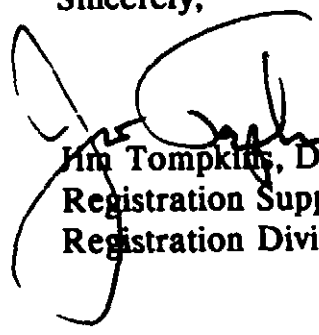
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

FRONT 3 9:14

ACCEPTED
with COMMENTS
in EPA Letter Dated
JAN 14 1994

GOWAN ENDOSULFAN 50 WSB

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
10163-130

FOR AGRICULTURAL USE ONLY
NOT FOR HOMEOWNER OR RESIDENTIAL USE

Active Ingredient: Endosulfan: Hexachlorohexahydromethano-2,4,3-	
benzodioxathiepin 3-oxide	50%
Inert Ingredients:	<u>50%</u>
	Total	100%

KEEP OUT OF REACH OF CHILDREN

 **DANGER-POISON** 
PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

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 back of 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. 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.

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.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER

Fatal if swallowed or inhaled. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Do not breathe vapor. Do not apply or allow to drift to areas occupied by unprotected humans or beneficial animals.

PERSONAL PROTECTIVE EQUIPMENT

- Applicators and other handlers must wear:**
- Coveralls over long-sleeved shirt and long pants
 - Waterproof gloves

- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading
- A respirator with either an organic vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

USER SAFETY RECOMMENDATIONS:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARD

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 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 all 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. Consult your State Fish and Game Agency before applying this product. Apply this product only as specified on this label. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

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.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

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

STORAGE AND DISPOSAL

Pesticide Storage

Do not store in or around the home.

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, fold and roll back bags, clamp 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 contact: (716) 735-3765.~~ Call CHEMTREC: 1 - 800-424-9300

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

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

BEST AVAILABLE COPY

Refer to attached booklet for additional directions and Crop Use Recommendations.

NET WEIGHT _____ LBS.

Gowan Company

EPA Reg. No. 10163-130
EPA Est. No. 10163-AZ -1

P.O. Box 5569
Yuma AZ 85366 5569

Hazardous Substance, Solid, N.O.S., (Endosulfan), ORM-E, NA 9188, RQ

Booklet, p. 1
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Directions for Use of Water Soluble Bags

Packets containing Gowan Endosulfan 50 WSB are water soluble. Do not allow packet to become wet prior to adding to the spray tank. Do not handle with wet hands. Reseal outer bag to protect remaining packets.

To prepare the spray mixture, drop the required number of unopened packets, as determined under crop recommendations into spray tank while filling with water to the desired level. Operate the agitator while mixing. Depending on the water temperature and the degree of agitation, the packets should be completely dissolved within approximately five minutes from the time they were added to the water. Use the specified dosage in the amount of water necessary to give complete coverage of the foliage. Determine the total amount of wettable powder to be added to the spray tank based on the rates in the crop recommendations. For each one pound of wettable powder to be added to the spray tank, use 1 one pound packet. For example, if it is determined that 10 pounds of Gowan Endosulfan 50 WSB should be added to the spray tank, add 10 one pound packets. Do not attempt to break open the water soluble packets. Where dosages are expressed as fractions of pounds, prepare tankload to the lower of the nearest whole pound.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR 16 1990

GENERAL INSTRUCTIONS

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. 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

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 10163-130

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. When applying 4 pounds or more ~~of this material~~, mix in a minimum of 10 gallons of water.

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.

BEST AVAILABLE COPY

CROP USE RECOMMENDATIONS

ALFALFA (Grown for Forage) (21): Meadow spittlebug - apply 1/2 pound per acre 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 apply more than once per cutting nor exceed a maximum of three applications per year. Do not graze or cut forage within 21 days of treatment.

APPLES (21): Apple aphid, Rosy apple aphid, Woolly apple aphid, Apple rust mite, Green fruitworm, Tarnished plant bug, first generation White apple leafhopper - Use 1 pound per 100 gallons of water or a maximum of 5 pounds 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 1½ pounds per 100 gallons to control Apple aphids and Rosy apple aphids. Do not exceed 3 applications per year or a maximum of 6 pounds total per acre per year. Do not feed cull fruits to animals nor allow livestock to graze in treated orchards.

Apples (30): Apple Aphid, Rosy Apple Aphid, Woolly Apple Aphid, Apple Rust Mite, Green Fruitworm, Tarnished Plant Bug, first generation White Apple Leafhopper—Use 1 pound per 100 gallons or a maximum of 6 pounds per acre. Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed pomace from treated apples to livestock. Do not feed cull fruits to animals nor allow livestock to graze treated orchards.

Apricots (21), Nectarines (21), Peaches (21): Peach Tree Borer, Lesser Peach Tree Borer—Use 1½ pounds per 100 gallons. West Coast—Use 1 to 1½ pounds per 100 gallons. Do not exceed 2 applications per year. Southeastern States—Use 3 to 5 pounds per 100 gallons post-harvest, not to exceed 6 pounds per acre. Best control is obtained with a single application during the first week of September. Spray all bark areas from ground level to lower scaffold limbs. All Uses: Do not feed cull fruits to animals or allow livestock to graze in treated orchards.

Apricots (30), Nectarines (30), Peaches (30): Catfacing insects (Stink-bug type), Green Peach Aphid, Black Cherry Aphid, Black Peach Aphid, Rusty Plum Aphid, Peach Twig Borer, Green Fruitworm, Peach Silver Mite—Use 1 pound per 100 gallons or a maximum of 4 to 5 pounds per acre. West Coast—Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed cull fruits to animals or allow livestock to graze treated orchards.

Apricots (30), Nectarines (30), Peaches (30): Catfacing insects (Stink-bugs per acre. Artichoke Plume Moth—Use 2 pounds per acre. 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. Do not exceed 2 applications per year.

Barley, Oats, Rye, Wheat: Army Cutworm—Use 1 pound per acre. For aerial application, apply in 2 gallons of diesel fuel oil per acre. Cereal Leaf Beetle (Illinois, Indiana, Michigan and Ohio only)—Use ½ to 1 pound 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. Do not apply after heads begin to form. Do not exceed 2 applications per year. Do not feed treated forage to livestock.

Beans (Succulent and Dry), Southern Field Peas (3): Black Bean Aphid, Bean Leafskeltonizer, Cucumber Beetle, Green Stink Bug, Mexican Bean Beetle, Cowpea Curculio—Use 1 to 2 pounds per acre. For control of Cowpea Curculio make 3 applications at 5-day intervals, starting when the pods are ½-inch long. Do not exceed 3 applications per year. Do not feed treated threshings to livestock or allow livestock 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 pounds 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. Do not exceed 2 applications per year.

Broccoli (7), Brussels Sprouts (14), Cabbage (7), Cauliflower (14): Cabbage Aphid, Cabbage Looper, Cross-Striped Cabbage Worm, Diamond-back Moth larvae, Flea Beetle, Harlequin Bug, Imported Cabbage Worm, Stink Bugs—Use 1½ to 2 pounds per acre. Armyworm, Cutworm—Use 2 pounds per acre. Do not exceed 2 applications per year.

Carrots (7): Green Peach Aphid—Use 1 to 2 pounds per acre. Do not use tops for food or feed. Do not exceed 1 application per season.

Celery (4): Green Peach Aphid, Cabbage Looper—Use 1 to 2 pounds per acre. Do not exceed one application per season. -OR- **Celery (7):** Green Peach Aphid—Use 1 pound per acre. Do not exceed 2 applications per season.

Cherries (21): Peach Tree Borer, Lesser Peach Tree Borer—Use 1½ pounds per 100 gallons. West Coast—Use 1 to 1½ pounds per 100 gallons. Thoroughly wet all bark from ground to scaffold limbs. Black Cherry Aphid, Plum Nursery Mite, Green Fruitworm—Use 1 pound per 100 gallons or a maximum of 4 to 5 pounds per acre. Pacific Northwest Only—Eyespotted Bud Moth, Fruit Tree Leafroller—Use 1 pound per 100 gallons at "popcorn" stage for Bud Moth control and during pre-pink stage of growth for leafroller control. Michigan only—For the control of Mineola Moth use 2 pounds per 100 gallons in the delayed dormant period. All Uses: Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed cull fruits to animals or allow livestock to graze in treated orchards.

Cherry, Peach, Plum Nursery Stock Dip: Peachtree Borer—Use 4 pounds per 40 gallons of water. Mix thoroughly. --
Immerse trees so that roots and crowns are covered well above grafting bud scar. Plant immediately or dry before returning stock to storage.

Citrus, Nursery and Non-Bearing Stock: Citrus Aphid—Use ½ pound per 100 gallons; a maximum of 5 pounds per acre. Do not apply to bearing trees or trees that will bear fruit within twelve months. Do not exceed 2 applications or a maximum of 6 pounds per acre per year.

Collards (21): Cabbage Looper, Diamondback Moth larvae, Harlequin Bug, Imported Cabbageworm—Use 1½ pounds per acre. Do not exceed one application per season.

Cotton: Thrips—Use 3 pounds per acre. Do not apply after bolls open. Do not graze meat or dairy animals in treated fields. Do not exceed 6 pounds per year.

Cotton (Eastern Use Only): Boll Weevil—Use 1 to 2½ pounds per acre. Bollworm, Cabbage Looper, Cotton Leafperforator, Lygus Bugs, Stink Bugs—Use 2 pounds per acre. Do not apply after bolls open. Do not graze dairy or meat animals in treated fields. Do not exceed 6 pounds per year.

Cotton (Western Use Only): Boll Weevil—Use 1 to 3 pounds per acre. Bollworm, Cabbage Looper, Cotton Leafperforator, Lygus Bugs, Stink Bugs—Use 2 to 3 pounds per acre. Do not apply after bolls open. Do not graze dairy or meat animals in treated fields. Do not exceed 6 pounds per year.

Cucumbers (2), Melons (2), Summer and Winter Squash (2): Aphids, Cucumber Beetles, Striped Flea Beetle, Melonworm, Pickleworm, Rindworm (on Watermelons), Squash Beetle, Squash Bug, Squash Vine Borer—Use 1 to 2 pounds per acre. For Vine Borer control, apply to flower buds, stems and vines beginning when moths first appear. For Cabbage Looper and Omniverous Leafroller on melons use 2 pounds per acre. Do not exceed 3 applications per year.

Eggplant (1): Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Whitefly, Blister Beetle, Green Stink Bug—Use 1 pound per acre. Do not exceed two applications per year.

Filberts (1): Filbert Aphid, Filbert Leafroller—Use 1 pound per 100 gallons or 3 to 4 pounds per acre. Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not graze livestock on orchard crops or grasses in treated areas.

Grapes (7): Grape Leafhopper, Rose Chafer, Grape Phylloxera (leaf form)—Use 1 pound per 100 gallons or 2 to 3 pounds per acre. Do not exceed 3 applications per year or a maximum of 6 pounds per acre per year. Do not use on Baco No. 1, Baco Noir, Concord, Seibel 7053 (Chancellor), Seibel 8357 (Colobel), Seibel 13053 (Cascade) varieties of grapes as severe injury is likely to occur.

Kale (21): Cabbage Flea Beetle, Imported Cabbageworm, Harlequin Bug—Use 1½ pounds per acre. Do not exceed one application per season.

Lettuce (14): Cabbage Looper, Green Peach Aphid, Diamondback Moth larvae, Imported Cabbageworm—Use 1½ to 2 pounds per acre. On Head Lettuce, do not exceed 3 applications after thinning. Remove wrapper leaves at harvest. On Leaf Lettuce, do not exceed 2 applications per season. All Uses: Do not feed crop refuse to livestock. Do not exceed 6 pounds per acre per year.

Mustard Greens (21): Aphids, Cabbage Looper, Imported Cabbageworm—Use 1½ pounds per acre. Do not exceed one application per season.

Pears (7): Green Fruitworm, Tarnished Plant Bug—Use 1 pound per 100 gallons; 4 to 5 pounds per acre. Apply at white bud or petal fall. Pear Leaf Blister Mite—Apply ½ to 1 pound per 100 gallons as a post harvest or dormant treatment. Pear Psylla—Use 5 pounds per acre in a minimum of 10 gallons of water by aerial application, in 40 gallons of water for semi-concentrate, or in 300 gallons of water for dilute application. Apply when adults are first observed or nymphs are small and repeat to maintain control. Consperse Stink Bug, Pear Rust Mite (foliar treatment)—Use 1 pound per 100 gallons; 4 to 5 pounds per acre. Stink Bugs must be wet by spray to obtain control. Consperse Stink Bug (Soil Treatment)—Use 1 pound per 100 gallons; 200 to 400 gallons per acre applied to orchard floor and around trees prior to bloom. All Uses: Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed cut fruits to animals or allow livestock to graze treated orchards.

NOTE: Aerial application does not result in satisfactory control and should only be employed if impossible to apply by ground.

Peas, Seed Crop Only (1): Pea Aphid, Pea Weevil—Use 1 to 1½ pounds per acre. Do not exceed 2 applications per year. 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.

Pecans: Black Pecan Aphid, Pecan Nut Casebearer, Spittlebug—Use 1½ pounds per 100 gallons. For Casebearer, apply when eggs of first generation appear on 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—Use 1 to 1½ pounds per 100 gallons 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 exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not graze livestock on orchard crops or grasses in treated areas.

Peppers (1): Green Peach Aphid, Flea Beetles, Hornworms, Pepper Maggot—Use 1 pound per acre. **Peppers (4):** Green Peach Aphid, Flea Beetles, Hornworms, Pepper Maggot—Use 2 pounds per acre. Do not exceed 2 applications per season.

Pineapple (for fresh market only) (7): Pineapple Fruit Mite—Use 3 to 4 pounds per acre. Apply at intervals of 7 to 10 days if necessary, particularly during the 40 day period of blooming. Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed treated forage or pineapple by-products to livestock.

Plums (7), Prunes (7): Fruitree Leafroller (Pacific Northwest Only)—Use 1 pound per 100 gallons; 4 to 5 pounds per acre. Apply during pre-pink stage of growth. **Hop Aphid, Leafcurl Plum Aphid, Plum Rust (Nursery) Mite, Thistle Aphid**—Use 1 pound per 100 gallons; 4 to 5 pounds per acre. For Aphids, apply when eggs hatch during pre-bloom or petal fall. Summer applications should be made before leaves curl. **Lesser Peachtree Borer**—Use 1½ pounds per 100 gallons; 4 to 5 pounds per acre. Apply spray to thoroughly wet trunk and main branches. **Peachtree Borer**—Use 1½ pounds per 100 gallons; 4 to 5 pounds per acre except West Coast use 1 to 1½ pounds per 100 gallons. Spray thoroughly to cover all bark areas from ground to scaffold limbs. **Peach Twig Borer**—Use 4 to 5 pounds per acre. **All Uses:** Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not graze orchard crops or grasses in treated areas.

Potatoes (1): Threelined Potato Beetle—Use 1 pound per acre. **Aphids, Colorado Potato Beetle, Green Stink Bug, Leafhopper, Potato Flea Beetles, Potato Leafhopper, Potato Tuberworm, Southern Armyworm, Whitefly**—Use 1 to 2 pounds per acre. **European Corn Borer, Potato Psyllid**—Use 1½ to 2 pounds per acre. **False Chinch Bug**—Use 2 pounds per acre. Do not exceed 6 applications per year or a maximum of 6 pounds per acre per year.

Pumpkins (1): Aphids, Cucumber Beetle, Squash Vine Borer—Use 1 to 2 pounds per acre. For Vine Borer apply to flower buds, stems and vines beginning when moths first appear. Do not exceed 6 applications per year or a maximum of 6 pounds per acre per year.

Safflower: Green Peach Aphid—Use 2 pounds per acre. Do not apply after flower heads open. Do not exceed 2 applications per year.

Spinach (21): Green Peach Aphid, Crown Mite—Use 1½ pounds per acre. Do not exceed one application per season.

Strawberries (4): Tarnished Plant Bug, Meadow Spittlebug, Strawberry Aphid—Use 2 pounds per acre. Do not reapply within 15 days or more than twice during a 35 day period when fruit is present. **Cyclamen Mite**—Use 4 pounds per acre in 400 gallons of water. Thoroughly wet the foliage, stem and crown of the plant. For multiple applications, do not apply at intervals less than 35 days during the fruiting period. Do not exceed 3 applications per year or a maximum of 6 pounds per acre per year.

Strawberries (4):—Northwest Use Only —Garden Symphylan (aids in reducing damage)—Use 2 pounds per 100 gallons (plant dip). 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. Drain and allow plants to dry before setting them out in the field.

Sugar Beets (30): Meadow Spittlebug—Use 1 pound per acre. **Green Peach Aphid**—Use 1 to 2 pounds per acre. **Sugar Beet Webworm**—Use 1½ to 2 pounds per acre. Make 1 to 2 applications per year as needed for control. **Western Use Only—Meadow Spittlebug**—Use 1 to 2 pounds per acre. **All Uses:** Do not feed treated tops to livestock. Do not exceed 6 pounds per acre per year.

SUNFLOWERS (1): Sunflower moth - Use 2 pounds per acre. Do not exceed three applications. Make first application at the onset of bloom. Allow 7 days between repeat applications. Do not feed treated forage to livestock.

SWEET CORN (Fresh Vegetable Use Only) (1): Corn leaf aphid - Use 2 pounds per acre. Corn earworm - Use 3 pounds per acre beginning when silks first appear and continuing until they begin to dry. Allow 5 days between applications. Do not exceed 3 applications per year or a maximum of 6 pounds per acre per year. 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.

SWEET POTATOES (1): Sweet potato flea beetle - Use 1 pound per acre. Begin applications shortly after transplanting or as soon as Flea beetles appear. Do not exceed 3 applications per year.

Tobacco (5): Budworm, Cabbage Looper, Flea Beetle, Green Peach Aphid, Hornworm—**SEED BED**—Use 1 pound per 100 gallons of water. Apply about 6 gallons of finished spray per 100 square yards. **PLANT BED**—Green June Bug larvae—Use ½ pound per 100 gallons of water drenching at a rate of 1 gallon per square yard. **FIELD**—Use 1 to 2 pounds per acre to control above insects. Stink Bugs—Use 2 to 3 pounds per acre. Do not exceed 6 applications per year or a maximum of 6 pounds per acre per year.

Tomatoes (Field and Greenhouse) (2): Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Hornworm, California only: Webworm—Use 1 to 2 pounds per acre. Cabbage Looper, Stink Bugs—Use 1½ to 2 pounds per acre. Tomato Fruitworm, Yellowstriped Armyworm—Use 2 pounds per acre. Whitefly—Use 1 pound per 100 gallons; 100 to 200 gallons of water per acre. Do not exceed 6 applications per year or a maximum of 6 pounds per acre per year.

Walnuts: Walnut Aphid—Use 3 to 4 pounds per acre. Do not apply after husk split. Do not exceed 2 applications or 6 pounds per acre per year. Do not graze livestock on orchard crops or grasses in treated areas.

COMMERCIALLY GROWN ORNAMENTALS

Ornamental Plants

Leatherleaf Fern: Leatherleaf Fern Borer—Use 1 pound per 100 gallons of water. Begin treatment when first larvae 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 3 applications per year.

Ornamentals (Greenhouse and Out of Doors): Aphids, Cyclamen Mite, Whitefly, Rose Chafer—Use 1 pound per 100 gallons of water. On Chrysanthemums, best results will be obtained if applied before plants flower. Do not exceed a maximum of 6 pounds per acre per year. Do not apply to Birch trees or to "Bonnafon Deluxe", "Fred Shoemith", and "White Knight" chrysanthemums as injury may result. In greenhouse applications, wear a mask or respirator approved by MSA and OSHA for protections against endosulfan.

Ornamental Trees and Shrubs

Dogwood, Lilac: Dogwood Borer, Lilac Borer—Use 1 to 2 pounds per 100 gallons of water. Apply in early June and repeat in 10 to 14 days. Drench all bark areas down to the ground level. Do not exceed 6 pounds per acre per year.

Douglas Fir (Grown for Ornamentals, Nursery Stock or Christmas trees) Pacific Northwest Only: Cooley Spruce Gall Adelgid, Douglas Fir Needle Midge, Aphids—Use 1 pound per 100 gallons of water (1 tablespoon per gallon). For Gall Adelgid control apply when white cotton tufts appear. For Needle Midge control apply in late April or early May just before buds open. Do not exceed 6 pounds per acre per year.

Pines: (Austrian, Jack, Red, Scotch, White) Zimmerman Pine Moth—Use 1 1/2 pounds per 100 gallons of water. Apply in mid-April and again, if necessary, in late fall. Thoroughly wet bark and main stem, especially where branches join main stem. Do not exceed 6 pounds per acre per year.

Shade Trees (except Birch), Shrubs: Aphids—Use 1 pound per 100 gallons of water. Do not exceed 6 pounds per acre per year.

Spruce: (New England area only) Spruce Gall Aphid—Use 1 pound per 100 gallons of water. Apply in late April or early May when aphids are present but before galls are formed. Do not exceed 6 pounds per acre per year.

Taxus: Taxus Bud Mite—Use 1 pound per 100 gallons of water. Apply 3 to 5 applications beginning in mid-May. Thoroughly spray foliage, twigs and bark. **Black Vine Weevil—**Use 2 pounds per 100 gallons of water. Spray thoroughly and drench soil under plants. Apply when weevils first appear. Repeat in 14 days. **All Uses:** Do not exceed 6 pounds per acre per year.

NOTICE ON CONDITIONS OF SALE

Our recommendations for 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. The buyer must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials.

14 7 14

Water Soluble bag label

Gowan Endosulfan 50 WSP, 10163-130

Active Ingredient: Endosulfan: Hexachlorohexahydromethano-2,4,3-	
benzodioxathiepin 3-oxide	50%
Inert ingredients:	50%

Danger-Poison
Peligro

Contains 50% endosulfan

See outside bag for complete precautions and directions for use
Gowan Company P.O. Box 5569 Yuma, AZ 85366



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

Anne Stout
GOWAN COMPANY
BOX 5569
YUMA, AZ 85366

JAN 14 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Subject: Label Amendment Submission of 08/02/93 in Response to PR Notice 93-7
EPA REG. NO. 10163-130
GOWAN ENDOSULFAN 50 W/SB

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



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

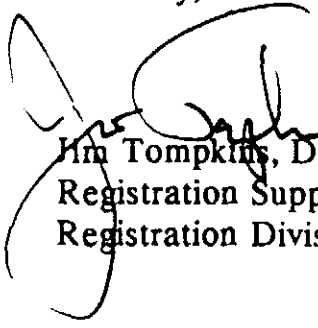
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,



Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

FRONT 3 of 14

ACCEPTED
with COMMENTS
In EPA Letter Dated
JAN 14 1994

GOWAN ENDOSULFAN 50 WSB

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
10163-130

**FOR AGRICULTURAL USE ONLY
NOT FOR HOMEOWNER OR RESIDENTIAL USE**

Active Ingredient: Endosulfan: Hexachlorohexahydromethano-2,4,3-	
benzodioxathiepin 3-oxide.....		50%
Inert Ingredients:		50%
		Total 100%

KEEP OUT OF REACH OF CHILDREN

**☒ DANGER-POISON ☒
 PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

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 back of 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. 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.

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.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER

Fatal if swallowed or inhaled. Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Do not breathe vapor. Do not apply or allow to drift to areas occupied by unprotected humans or beneficial animals.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves

- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing, or loading
- A respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

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

USER SAFETY RECOMMENDATIONS:

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish, birds, and other wildlife. Birds feeding on treated areas may be killed. Do not apply directly to water or wetlands. 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 all 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. Consult your State Fish and Game Agency before applying this product. Apply this product only as specified on this label. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

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.

DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil or water is:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

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

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STORAGE AND DISPOSAL**Pesticide Storage**

Do not store in or around the home.

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, fold and roll back bags, clamp 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 collect. (716) 735-3765.~~ Call CHEMTREC: 1 - 800-424-9300

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

Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Refer to attached booklet for additional directions and Crop Use Recommendations.

NET WEIGHT _____ LBS.

Gowan Company

EPA Reg. No. 10163-130
EPA Est. No. 10163-AZ-1

P.O. Box 5569

Yuma AZ 85366-5569

Hazardous Substance, Solid, N.O.S., (Endosulfan), ORM-E, NA 9188, RQ

7.9.14

Directions for Use of Water Soluble Bags

Packets containing Gowan Endosulfan 50 WSB are water soluble. Do not allow packet to become wet prior to adding to the spray tank. Do not handle with wet hands. Reseal outer bag to protect remaining packets.

To prepare the spray mixture, drop the required number of unopened packets, as determined under crop recommendations into spray tank while filling with water, to the desired level. Operate the agitator while mixing. Depending on the water temperature and the degree of agitation, the packets should be completely dissolved within approximately five minutes from the time they were added to the water. Use the specified dosage in the amount of water necessary to give complete coverage of the foliage. Determine the total amount of wettable powder to be added to the spray tank based on the rates in the crop recommendations. For each one pound of wettable powder to be added to the spray tank, use 1 one pound packet. For example, if it is determined that 10 pounds of Gowan Endosulfan 50 WSB should be added to the spray tank, add 10 one pound packets. Do not attempt to break open the water soluble packets. Where dosages are expressed as fractions of pounds, prepare tank load to the lower of the nearest whole pound.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

MAR 16 1990

GENERAL INSTRUCTIONS

Not for use or storage in or around the home.

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide
registered under EPA Reg. No.
10163-130

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. When applying 4 pounds or more ~~of this material~~, mix in a minimum of 10 gallons of water.

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.

CROP USE RECOMMENDATIONS

ALFALFA (Grown for Forage) (21): Meadow spittlebug - apply 1/2 pound per acre 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 apply more than once per cutting nor exceed a maximum of three applications per year. Do not graze or cut forage within 21 days of treatment.

APPLES (21): Apple aphid, Rosy apple aphid, Woolly apple aphid, Apple rust mite, Green fruitworm, Tarnished plant bug, first generation White apple leafhopper - Use 1 pound per 100 gallons of water or a maximum of 5 pounds 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 1½ pounds per 100 gallons to control Apple aphids and Rosy apple aphids. Do not exceed 3 applications per year or a maximum of 6 pounds total per acre per year. Do not feed cull fruits to animals nor allow livestock to graze in treated orchards.

Apples (30): Apple Aphid, Rosy Apple Aphid, Woolly Apple Aphid, Apple Rust Mite, Green Fruitworm, Tarnished Plant Bug, first generation White Apple Leafhopper—Use 1 pound per 100 gallons or a maximum of 6 pounds per acre. Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed pomace from treated apples to livestock. Do not feed cull fruits to animals nor allow livestock to graze treated orchards.

Apricots (21), Nectarines (21), Peaches (21): Peach Tree Borer, Lesser Peach Tree Borer—Use 1½ pounds per 100 gallons. **West Coast**—Use 1 to 1½ pounds per 100 gallons. Do not exceed 2 applications per year. **Southeastern States**—Use 3 to 5 pounds per 100 gallons post-harvest, not to exceed 6 pounds per acre. Best control is obtained with a single application during the first week of September. Spray all bark areas from ground level to lower scaffold limbs. **All Uses:** Do not feed cull fruits to animals or allow livestock to graze in treated orchards.

Apricots (30), Nectarines (30), Peaches (30): Catfacing insects (Stink-bug type), Green Peach Aphid, Black Cherry Aphid, Black Peach Aphid, Rusty Plum Aphid, Peach Twig Borer, Green Fruitworm, Peach Silver Mite—Use 1 pound per 100 gallons or a maximum of 4 to 5 pounds per acre. **West Coast**—Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed cull fruits to animals or allow livestock to graze treated orchards.

Apricots (30), Nectarines (30), Peaches (30): Catfacing insects (Stink-bug type) per acre. Artichoke Plume Moth—Use 2 pounds per acre. 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. Do not exceed 2 applications per year.

Barley, Oats, Rye, Wheat: Army Cutworm—Use 1 pound per acre. For aerial application, apply in 2 gallons of diesel fuel oil per acre. **Cereal Leaf Beetle** (Illinois, Indiana, Michigan and Ohio only)—Use ½ to 1 pound 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. Do not apply after heads begin to form. Do not exceed 2 applications per year. Do not feed treated forage to livestock.

Beans (Succulent and Dry), Southern Field Peas (3): Black Bean Aphid, Bean Leaf-skeletonizer, Cucumber Beetle, Green Stink Bug, Mexican Bean Beetle, Cowpea Curculio—Use 1 to 2 pounds per acre. For control of Cowpea Curculio make 3 applications at 5-day intervals, starting when the pods are ½-inch long. Do not exceed 3 applications per year. Do not feed treated threshings to livestock or allow livestock 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 pounds 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. Do not exceed 2 applications per year.

9/11

Broccoli (7), Brussels Sprouts (14), Cabbage (7), Cauliflower (14): Cabbage Aphid, Cabbage Looper, Cross-Striped Cabbage Worm, Diamond-back Moth larvae, Flea Beetle, Harlequin Bug, Imported Cabbage Worm, Stink Bugs—Use 1½ to 2 pounds per acre. Armyworm, Cutworm—Use 2 pounds per acre. Do not exceed 2 applications per year.

Carrots (7): Green Peach Aphid—Use 1 to 2 pounds per acre. Do not use tops for food or feed. Do not exceed 1 application per season.

Celery (4): Green Peach Aphid, Cabbage Looper—Use 1 to 2 pounds per acre. Do not exceed one application per season. **-OR- Celery (7):** Green Peach Aphid—Use 1 pound per acre. Do not exceed 2 applications per season.

Cherries (21): Peach Tree Borer, Lesser Peach Tree Borer—Use 1½ pounds per 100 gallons. **West Coast**—Use 1 to 1½ pounds per 100 gallons. Thoroughly wet all bark from ground to scaffold limbs. Black Cherry Aphid, Plum Nursery Mite, Green Fruitworm—Use 1 pound per 100 gallons or a maximum of 4 to 5 pounds per acre. **Pacific Northwest Only**—Eyespotted Bud Moth, Fruit Tree Leafroller—Use 1 pound per 100 gallons at "popcorn" stage for Bud Moth control and during pre-pink stage of growth for leafroller control. **Michigan only**—For the control of Mineola Moth use 2 pounds per 100 gallons in the delayed dormant period. **All Uses:** Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed cull fruits to animals or allow livestock to graze in treated orchards.

Cherry, Peach, Plum Nursery Stock Dip: Peachtree Borer—Use 4 pounds per 40 gallons of water. Mix thoroughly. --
Immerse trees so that roots and crowns are covered well above grafting bud scar. Plant immediately or dry before returning stock to storage.

Citrus, Nursery and Non-Bearing Stock: Citrus Aphid—Use ½ pound per 100 gallons; a maximum of 5 pounds per acre. Do not apply to bearing trees or trees that will bear fruit within twelve months. Do not exceed 2 applications or a maximum of 6 pounds per acre per year.

Collards (21): Cabbage Looper, Diamondback Moth larvae, Harlequin Bug, Imported Cabbageworm—Use 1½ pounds per acre. Do not exceed one application per season.

Cotton: Thrips—Use 3 pounds per acre. Do not apply after bolls open. Do not graze meat or dairy animals in treated fields. Do not exceed 6 pounds per year.

Cotton (Eastern Use Only): Boll Weevil—Use 1 to 2½ pounds per acre. Bollworm, Cabbage Looper, Cotton Leafperforator, Lygus Bugs, Stink Bugs—Use 2 pounds per acre. Do not apply after bolls open. Do not graze dairy or meat animals in treated fields. Do not exceed 6 pounds per year.

Cotton (Western Use Only): Boll Weevil—Use 1 to 3 pounds per acre. Bollworm, Cabbage Looper, Cotton Leafperforator, Lygus Bugs, Stink Bugs—Use 2 to 3 pounds per acre. Do not apply after bolls open. Do not graze dairy or meat animals in treated fields. Do not exceed 6 pounds per year.

Cucumbers (2), Melons (2), Summer and Winter Squash (2): Aphids, Cucumber Beetles, Striped Flea Beetle, Melonworm, Pickleworm, Rindworm (on Watermelons), Squash Beetle, Squash Bug, Squash Vine Borer—Use 1 to 2 pounds per acre. For Vine Borer control, apply to flower buds, stems and vines beginning when moths first appear. For Cabbage Looper and Omniverous Leafroller on melons use 2 pounds per acre. Do not exceed 3 applications per year.

Eggplant (1): Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Whitefly, Blister Beetle, Green Stink Bug—Use 1 pound per acre. Do not exceed two applications per year.

Filberts (1): Filbert Aphid, Filbert Leafroller—Use 1 pound per 100 gallons or 3 to 4 pounds per acre. Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not graze livestock on orchard crops or grasses in treated areas.

10/14

Grapes (7): Grape Leafhopper, Rose Chafer, Grape Phylloxera (leaf form)—Use 1 pound per 100 gallons or 2 to 3 pounds per acre. Do not exceed 3 applications per year or a maximum of 6 pounds per acre per year. Do not use on Baco No. 1, Baco Noir, Concord, Seibel 7053 (Chancellor), Seibel 8357 (Colobel), Seibel 13053 (Cascade) varieties of grapes as severe injury is likely to occur.

Kale (21): Cabbage Flea Beetle, Imported Cabbageworm, Harlequin Bug—Use 1½ pounds per acre. Do not exceed one application per season.

Lettuce (14): Cabbage Looper, Green Peach Aphid, Diamondback Moth larvae, Imported Cabbageworm—Use 1½ to 2 pounds per acre. On Head Lettuce, do not exceed 3 applications after thinning. Remove wrapper leaves at harvest. On Leaf Lettuce, do not exceed 2 applications per season. **All Uses:** Do not feed crop refuse to livestock. Do not exceed 6 pounds per acre per year.

Mustard Greens (21): Aphids, Cabbage Looper, Imported Cabbageworm—Use 1½ pounds per acre. Do not exceed one application per season.

Pears (7): Green Fruitworm, Tarnished Plant Bug—Use 1 pound per 100 gallons; 4 to 5 pounds per acre. Apply at white bud or petal fall. Pear Leaf Blister Mite—Apply ½ to 1 pound per 100 gallons as a post harvest or dormant treatment. Pear Psylla—Use 5 pounds per acre in a minimum of 10 gallons of water by aerial application, in 40 gallons of water for semi-concentrate, or in 300 gallons of water for dilute application. Apply when adults are first observed or nymphs are small and repeat to maintain control. Conspere Stink Bug, Pear Rust Mite (foliar treatment)—Use 1 pound per 100 gallons; 4 to 5 pounds per acre. Stink Bugs must be wet by spray to obtain control. Conspere Stink Bug (Soil Treatment)—Use 1 pound per 100 gallons; 200 to 400 gallons per acre applied to orchard floor and around trees prior to bloom. **All Uses:** Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed cull fruits to animals or allow livestock to graze treated orchards.

NOTE: Aerial application does not result in satisfactory control and should only be employed if impossible to apply by ground.

Peas, Seed Crop Only (1): Pea Aphid, Pea Weevil—Use 1 to 1½ pounds per acre. Do not exceed 2 applications per year. 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.

Pecans: Black Pecan Aphid, Pecan Nut Casebearer, Spittlebug—Use 1½ pounds per 100 gallons. For Casebearer, apply when eggs of first generation appear on 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—Use 1 to 1½ pounds per 100 gallons 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 exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not graze livestock on orchard crops or grasses in treated areas.

Peppers (1): Green Peach Aphid, Flea Beetles, Hornworms, Pepper Maggot—Use 1 pound per acre. **Peppers (4):** Green Peach Aphid, Flea Beetles, Hornworms, Pepper Maggot—Use 2 pounds per acre. Do not exceed 2 applications per season.

Pineapple (for fresh market only) (7): Pineapple Fruit Mite—Use 3 to 4 pounds per acre. Apply at intervals of 7 to 10 days if necessary, particularly during the 40 day period of blooming. Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not feed treated forage or pineapple by-products to livestock.

Plums (7), Prunes (7): Fruittree Leafroller (Pacific Northwest Only)—Use 1 pound per 100 gallons; 4 to 5 pounds per acre. Apply during pre-pink stage of growth. Hop Aphid, Leafcurl Plum Aphid, Plum Rust (Nursery) Mite, Thistle Aphid—Use 1 pound per 100 gallons; 4 to 5 pounds per acre. For Aphids, apply when eggs hatch during pre-bloom or petal fall. Summer applications should be made before leaves curl. **Lesser Peachtree Borer—**Use 1½ pounds per 100 gallons; 4 to 5 pounds per acre. Apply spray to thoroughly wet trunk and main branches. **Peachtree Borer—**Use 1½ pounds per 100 gallons; 4 to 5 pounds per acre except West Coast use 1 to 1½ pounds per 100 gallons. Spray thoroughly to cover all bark areas from ground to scaffold limbs. **Peach Twig Borer—**Use 4 to 5 pounds per acre. **All Uses:** Do not exceed 2 applications per year or a maximum of 6 pounds per acre per year. Do not graze orchard crops or grasses in treated areas.

Potatoes (1): Threelined Potato Beetle—Use 1 pound per acre. Aphids, Colorado Potato Beetle, Green Stink Bug, Leafhopper, Potato Flea Beetles, Potato Leafhopper, Potato Tuberworm, Southern Armyworm, Whittely—Use 1 to 2 pounds per acre. European Corn Borer, Potato Psyllid—Use 1½ to 2 pounds per acre. False Chinch Bug—Use 2 pounds per acre. Do not exceed 6 applications per year or a maximum of 6 pounds per acre per year.

Pumpkins (1): Aphids, Cucumber Beetle, Squash Vine Borer—Use 1 to 2 pounds per acre. For Vine Borer apply to flower buds, stems and vines beginning when moths first appear. Do not exceed 6 applications per year or a maximum of 6 pounds per acre per year.

Safflower: Green Peach Aphid—Use 2 pounds per acre. Do not apply after flower heads open. Do not exceed 2 applications per year.

Spinach (21): Green Peach Aphid, Crown Mite—Use 1½ pounds per acre. Do not exceed one application per season.

Strawberries (4): Tarnished Plant Bug, Meadow Spittlebug, Strawberry Aphid—Use 2 pounds per acre. Do not reapply within 15 days or more than twice during a 35 day period when fruit is present. Cyclamen Mite—Use 4 pounds per acre in 400 gallons of water. Thoroughly wet the foliage, stem and crown of the plant. For multiple applications, do not apply at intervals less than 35 days during the fruiting period. Do not exceed 3 applications per year or a maximum of 6 pounds per acre per year.

Strawberries (4):—Northwest Use Only —Garden Symphytan (aids in reducing damage)—Use 2 pounds per 100 gallons (plant dip). 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. Drain and allow plants to dry before setting them out in the field.

Sugar Beets (30): Meadow Spittlebug—Use 1 pound per acre. Green Peach Aphid—Use 1 to 2 pounds per acre. Sugar Beet Webworm—Use 1½ to 2 pounds per acre. Make 1 to 2 applications per year as needed for control. **Western Use Only—Meadow Spittlebug—**Use 1 to 2 pounds per acre. **All Uses:** Do not feed treated tops to livestock. Do not exceed 6 pounds per acre per year.

SUNFLOWERS (1): Sunflower moth - Use 2 pounds per acre. Do not exceed three applications. Make first application at the onset of bloom. Allow 7 days between repeat applications. Do not feed treated forage to livestock.

SWEET CORN (Fresh Vegetable Use Only) (1): Corn leaf aphid - Use 2 pounds per acre. Corn earworm - Use 3 pounds per acre beginning when silks first appear and continuing until they begin to dry. Allow 5 days between applications. Do not exceed 3 applications per year or a maximum of 6 pounds per acre per year. 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.

SWEET POTATOES (1): Sweet potato flea beetle - Use 1 pound per acre. Begin applications shortly after transplanting or as soon as Flea beetles appear. Do not exceed 3 applications per year.

Tobacco (5): Budworm, Cabbage Looper, Flea Beetle, Green Peach Aphid, Hornworm—**SEED BED**—Use 1 pound per 100 gallons of water. Apply about 6 gallons of finished spray per 100 square yards. **PLANT BED**—Green June Bug larvae—Use ½ pound per 100 gallons of water drenching at a rate of 1 gallon per square yard. **FIELD**—Use 1 to 2 pounds per acre to control above insects. Stink Bugs—Use 2 to 3 pounds per acre. Do not exceed 6 applications per year or a maximum of 6 pounds per acre per year.

Tomatoes (Field and Greenhouse) (2): Blister Beetle, Colorado Potato Beetle, Flea Beetle, Green Peach Aphid, Hornworm. **California only:** Webworm—Use 1 to 2 pounds per acre. Cabbage Looper, Stink Bugs—Use 1½ to 2 pounds per acre. Tomato Fruitworm, Yellowstriped Armyworm—Use 2 pounds per acre. Whitefly—Use 1 pound per 100 gallons; 100 to 200 gallons of water per acre. Do not exceed 6 applications per year or a maximum of 6 pounds per acre per year.

Walnuts: Walnut Aphid—Use 3 to 4 pounds per acre. Do not apply after husk split. Do not exceed 2 applications or 6 pounds per acre per year. Do not graze livestock on orchard crops or grasses in treated areas.

COMMERCIALLY GROWN ORNAMENTALS

Ornamental Plants

Leatherleaf Fern: Leatherleaf Fern Borer—Use 1 pound per 100 gallons of water. Begin treatment when first larvae 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 3 applications per year.

Ornamentals (Greenhouse and Out of Doors): Aphids, Cyclamen Mite, Whitefly, Rose Chafer—Use 1 pound per 100 gallons of water. On Chrysanthemums, best results will be obtained if applied before plants flower. Do not exceed a maximum of 6 pounds per acre per year. Do not apply to Birch trees or to "Bonnafon Deluxe", "Fred Shoemith", and "White Knight" chrysanthemums as injury may result. In greenhouse applications wear a mask or respirator approved by MSA and OSHA for protections against endosulfan.

Ornamental Trees and Shrubs

Dogwood, Lilac: Dogwood Borer, Lilac Borer—Use 1 to 2 pounds per 100 gallons of water. Apply in early June and repeat in 10 to 14 days. Drench all bark areas down to the ground level. Do not exceed 6 pounds per acre per year.

Douglas Fir (Grown for Ornamentals, Nursery Stock or Christmas trees) Pacific Northwest Only: Cooley Spruce Gall Adelgid, Douglas Fir Needle Midge, Aphids—Use 1 pound per 100 gallons of water (1 tablespoon per gallon). For Gall Adelgid control apply when white cotton tufts appear. For Needle Midge control apply in late April or early May just before buds open. Do not exceed 6 pounds per acre per year.

Pines: (Austrian, Jack, Red, Scotch, White) Zimmerman Pine Moth—Use 1½ pounds per 100 gallons of water. Apply in mid-April and again, if necessary, in late fall. Thoroughly wet bark and main stem, especially where branches join main stem. Do not exceed 6 pounds per acre per year.

Shade Trees (except Birch), Shrubs: Aphids—Use 1 pound per 100 gallons of water. Do not exceed 6 pounds per acre per year.

Spruce: (New England area only) Spruce Gall Aphid—Use 1 pound per 100 gallons of water. Apply in late April or early May when aphids are present but before galls are formed. Do not exceed 6 pounds per acre per year.

Taxus: Taxus Bud Mite—Use 1 pound per 100 gallons of water. Apply 3 to 5 applications beginning in mid-May. Thoroughly spray foliage, twigs and bark. **Black Vine Weevil—**Use 2 pounds per 100 gallons of water. Spray thoroughly and drench soil under plants. Apply when weevils first appear. Repeat in 14 days. **All Uses:** Do not exceed 6 pounds per acre per year.

NOTICE ON CONDITIONS OF SALE

Our recommendations for 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. The buyer must assume all responsibility, including injury or damage, resulting from its misuse as such, or in combination with other materials.

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Water Soluble bag label

Gowan Endosulfan 50 WSB, 10163-130

Active Ingredient: Endosulfan: Hexachlorohexahydromethano-2,4,3-
benzodioxathiepin 3-oxide 50%
Inert Ingredients: 50%

Danger-Poison

Peligro

Contains 50% endosulfan

See outside bag for complete precautions and directions for use

Gowan Company P. O. Box 5569 Yuma, AZ 85366