



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

JAN 14 1994

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

Bethany G. Hulcy  
GOWAN COMPANY  
BOX 5569  
YUMA, AZ 85366

**Subject:** Label Amendment Submission of 08/13/93 In Response to PR Notice 93-7  
EPA Reg. No. 10163-160  
GOWAN DIMETHOATE 4

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 subject to the comments reflected on the enclosed sheet. 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:**

By the next label printing make all the specified changes to your labeling. 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

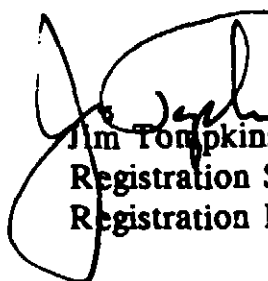
Submit the final printed labeling via the U.S. Postal Service to:

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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division

Bethany Hulcy  
GOWAN COMPANY  
BOX 5569  
YUMA AZ 85366

Subject: Label Amendment Submission of 08/13/93  
to Comply with WPS Labeling Requirements  
EPA Reg Nr. 10163-160  
GOWAN DIMETHOATE 4

The following specific comments pertain to your  
WPS labeling submission concerning the product  
cited above:

There is a typographical error(s) in the Spanish language  
text.

4 7 12

ACCEPTED  
with COMMENTS  
In EPA Letter Dated  
JAN 14 1994



# DIMETHOATE 4

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.  
10163-160

<b>Active Ingredient:</b> Dimethoate; (O,O-dimethyl S-[(methylcarbamoyl) methyl] phosphorodithioate) .....	43.5%
<b>Inert Ingredients:</b> .....	56.5%
	<b>Total 100.0%</b>

Contains 4 pounds of dimethoate per gallon

**KEEP OUT OF REACH OF CHILDREN**

## WARNING      AVISO

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

### STATEMENT OF PRACTICAL TREATMENT Organophosphate Insecticide

- IF SWALLOWED**, do not induce vomiting. Call a Poison Control Center immediately. Get medical attention.
- IF INHALED**, remove victim to fresh air. Apply artificial respiration if necessary.
- IF ON SKIN**, wash with plenty of soap and water. Get medical attention.
- IF IN EYES**, flush eyes with plenty of water. Seek medical attention.

**NOTE TO PHYSICIAN:** Atropine is antidotal if symptoms of cholinesterase inhibition are present. 2-PAM: PROTOPAM chloride may be effective as an adjunct to atropine. Use according to label directions.

Net Contents \_\_\_\_\_ Gallons

EPA Reg. No. 10163-160  
EPA Est. No. 10163-AZ-1

Gowan Company  
P.O. BOX 5569  
YUMA, AZ 85366

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Warning - Harmful or fatal if swallowed. Vapor harmful- concentrated material. Avoid breathing vapor or spray mist. Use only with adequate ventilation. Avoid contact with eyes as this product causes eye irritation. Avoid contact with skin, and clothing. Keep container lid closed. Do not contaminate food or feed products.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

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

**Applicators and other handlers (other than mixers and loaders) must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as Barrier Laminate, Butyl Rubber  $\geq 14$ mils, Nitrile Rubber  $\geq 14$ mils, or Viton  $\geq 14$ mils
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

**Mixers and Loaders must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as Barrier Laminate, Butyl Rubber  $\geq 14$ mils, Nitrile Rubber  $\geq 14$ mils, or Viton  $\geq 14$ mils
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear
- For exposures in enclosed areas- 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)
- For exposures outdoors- Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C)

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

**USER SAFETY RECOMMENDATIONS**

User 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.

**AERIAL APPLICATIONS: AUTOMATIC FLAGGING DEVICES SHOULD BE USED WHENEVER FEASIBLE.**

### ENVIRONMENTAL HAZARDS

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

This pesticide is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Protective information may be obtained from your Agricultural Extension Service.

### PHYSICAL AND CHEMICAL HAZARDS

Combustible liquid and vapor. 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 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 48 hours.

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

- Coveralls
- Chemical-resistant gloves, such as Barrier Laminate, Butyl Rubber  $\geq 14$  mils, Nitrile Rubber  $\geq 14$  mils, or Viton  $\geq 14$  mils
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

**STORAGE AND DISPOSAL**

DO NOT contaminate water, food, or feed by storage or disposal.

**STORAGE:** Store in original container. DO NOT STORE BELOW 45° F

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

**DIRECTIONS FOR APPLICATION**

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

**COMPATIBILITY**

DIMETHOATE 4 is formulated for application in water suspensions. It is compatible with most insecticides, fungicides, and miticides. It should not be used, however, with alkaline materials such as Bordeaux mixture and lime.

Gowan Dimethoate 4 can be mixed with carbaryl, diazinon, pyrethroids, methyl azinphos, malathion, parathion, dicofol, dodine, captan, zineb, and thiram. Because uniform dispersability and sprayability may be influenced by pesticide combinations used, it is recommended that compatibility be determined before adding pesticides to the spray tank. In a pint or quart jar, mix products and water proportionate to the intended tank mix. If there is any separation, we recommend that the combination not be used. The addition of a nonionic general purpose spreader-activator will usually eliminate any incompatibility noted.

**DILUTION DIRECTIONS**

The rate required for thorough, uniform coverage varies with plant growth at the time of application. The following rates are therefore intended to cover a broad range of conditions.

**Dilute Applications:** Field and Vegetable Crops: Apply specified rate in 20 to 75 gallons of water per acre. Fruits and Nuts: Apply specified rate in 100 to 800 gallons of water per acre. For citrus, use up to 2,000 gallons of water per acre.

**Concentrate Applications:** Field and Vegetable Crops: Apply specified rate in not less than 5 gallons of water per acre. Fruits and Nuts: Apply specified rate in 20 to 100 gallons of water per acre. These applications require special concentrate equipment.

**Air Applications:** Field and Vegetable Crops: Apply specified rate in a minimum of 1 gallon of water per acre. Fruits and Nuts: Apply specified rate in a minimum of 5 gallons of water per acre.

**CHEMIGATION STATEMENT**

Refer to supplemental labeling entitled APPLICATION THROUGH IRRIGATION SYSTEMS, CHEMIGATION for use directions for chemigation. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed.

**CROP USE DIRECTIONS**

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

The interval between last application and harvest is given in ( ) following the crop name.

**FIELD CROPS**

**Alfalfa (10):** Aphids, Grasshoppers, Leafhoppers, Plant Bugs including Lygus, reduction of Alfalfa Weevil larvae; Use 1/2 to 1 pint per acre. This pesticide is highly toxic to bees, do not apply if bees are visiting the areas to be treated when the crop or weeds are in bloom. Do not graze livestock in the treated crops, hay, threshings, or stubble within 10 days of application. Effective only on cutting to which applied. Limit use to one application per cutting.

**Alfalfa (seed crop only):** Aphids, Grasshoppers, Leafhoppers, Lygus Bugs, reduction of Alfalfa Weevil larvae; Use 1/2 to 1 pint per acre. This pesticide is highly toxic to bees, do not apply if bees are visiting the areas to be treated when the crop or weeds are in bloom. Do not feed livestock in treated crops, hay, threshings, or stubble within 10 days of application.

**Field Corn (14):** Banks Grass Mites (excluding Trans-Pecos area of Texas), Aphids, Bean Beetle, Corn Rootworm adult; Use 2/3 to 1 pint per acre. Grasshoppers; Use 1 pint per acre. Do not apply to corn during the pollen-shed period. Apply as necessary but make no more than three applications per year. Do not feed or graze within 14 days of last application.

**Cotton (Arizona and California) (14):** Leafhoppers, Fleahoppers, Plant Bugs including Lygus; Use 1/2 to 1 pint per acre. Repeat applications should not be made at intervals closer than 14 days. Make only 2 applications per season at the higher rate. Do not feed treated forage or graze livestock on treated fields.

**Cotton (Except Arizona and California) (14 if water is used for dilution, 40 if once-refined vegetable oil is used for dilution):** Aphids, Mites, Thrips, Fleahoppers; Use 1/4 to 1/2 pint per acre. Plant Bugs including Lygus; Use 1/2 pint per acre. If water is used for dilution, repeat applications should not be made at intervals closer than 14 days. Do not feed treated forage or graze livestock on treated fields. If once-refined vegetable oil is used for dilution, repeat applications should not be made at intervals closer than 40 days. Make only 2 applications per season at the higher rate. Apply at least 1 quart of finished spray per acre. Do not feed treated forage or graze livestock on treated fields.



**Safflower (Arizona and California) (14):** Aphids, Leafhoppers, Plant Bugs including Lygus, Thrips; Use 1/2 to 1 pint per acre. Repeat applications should not be made at intervals closer than 14 days. Make only 2 applications per season at the higher rate.

**Sorghum (milo):** Aphids; Use 1/2 to 1 pint per acre. Banks Grass Mites (excluding Trans-Pecos area of Texas), Grasshoppers, Spider Mites; Use 1 pint per acre. Sorghum Midge; Use 1/4 to 1/2 pint per acre. Do not apply after heading. Do not feed or graze within 28 days of last application. Apply as needed but not more than 3 applications per season.

**Soybeans (21):** Mexican Bean Beetle, Spider Mites, Bean Leaf Beetle, Leafhoppers, Three-cornered Alfalfa Hopper \*, Grasshoppers; Use 1 pint per acre. Do not feed or graze within 5 days of last application.

\*Not registered in California

**Wheat (35):** Aphids; Use 1/2 to 3/4 pint per acre. Brown Wheat Mite; Use 1/3 to 1/2 pint per acre. Grasshoppers; Use 3/4 pint per acre. Do not apply within 14 days of grazing immature plant. Do not make more than 2 applications per season.

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

#### VEGETABLE CROPS

**Beans (green, lima, snap, dry) (0):** Aphids, Grasshoppers, Leafhoppers, Leaf Miners, Lygus Bugs, Mites, Bean Leaf Beetle, Mexican Bean Beetle; Use 1/2 to 1 pint per acre. This pesticide is highly toxic to bees, do not apply if bees are visiting the areas to be treated when the crop or weeds are in bloom. Do not feed treated vines.

**Broccoli, Cauliflower (7):** Aphids; Use 1/2 to 1 pint per acre.

**Cabbage (7):** Aphids; Use 1/2 to 1 pint per acre.

**Celery (Florida) (7):** Leaf Miners; Use 1 pint per acre.

**Head Lettuce (7):** Aphids, Leafhoppers, Leaf Miners; Use 1/2 pint per acre.

**Leaf lettuce, Spinach, Collards, Kale, Turnip (greens and roots), Mustard Greens, Swiss Chard, Endive (Escarole) (14):** Aphids, Leafhoppers, Leaf Miners; Use 1/2 pint per acre.

**Melons (except Watermelons) (3):** Aphids, Leafhoppers, Leaf Miners, Thrips; Use 1 pint per acre.

**Watermelons (3):** Aphids, Leafhoppers, Leaf Miners; Use 1/2 to 1 pint per acre.

**Lupine (0):** Aphids, Lygus Bugs; Use 1/2 to 1 pint per acre. Apply when Aphids first appear. This pesticide is highly toxic to bees, do not apply if bees are visiting the areas to be treated when the crop or weeds are in bloom. Do not make more than 2 applications per crop season. Do not feed or graze forage or hay.

**Peas , Lentils (0):** Aphids; Use 1/3 pint per acre. Do not feed or graze hay within 21 days after last application. Do not make more than one application per growing season. This pesticide is highly toxic to bees, do not apply if bees are visiting the areas to be treated when the crop or weeds are in bloom.

**Peppers (0):** Aphids, Leaf Miners, Maggots; Use 1/2 to 2/3 pint per acre.

**Potatoes (0):** Aphids, Grasshoppers, Leafhoppers, Leaf Miners; Use 1/2 to 1 pint per acre.

**Tomatoes (7):** Aphids, Leafhoppers, Leaf Miners; Use 1/2 to 1 pint per acre.

#### FRUIT AND NUT CROPS

**Apples (28):** Apple Maggot, Codling Moth\*; Use 3 to 4 pints per acre (or Northeast and North Central states ; Use 1 pint per 100 gallons based on 300 to 400 gallons of water per acre). Apply at petal-fall and every 10-14 days thereafter until control is achieved. Under heavy infestations, some sting injury may occur. Do not apply when trees or substantial number of weeds in the orchard are in bloom. Do not graze livestock in treated orchards.

\* Midwest and Eastern states only.

**Apples, Pears (28):** Aphids, Leafhoppers, Mites (except Rust Mites); Use 1 1/2 to 3 pints per acre (or Northeast and North Central states; Use 1/2 to 1 pint per 100 gallons based on 300 gallons of water per acre). Do not apply when trees or substantial number of weeds in the orchard are in bloom. Do not graze livestock in treated orchards.

**Grapefruit, Lemons, Oranges, Tangerines** (see text below for harvest intervals): Aphids; Use 1 to 2 quarts per acre in 5 to 10 gallons of water. Apply as an outside coverage spray. The interval between last application and harvest is 15 days. Mites (except Rust Mites); Use 1/2 to 1 pint per 100 gallons of water with a maximum of 2 quarts per acre. The interval between last application and harvest is 15 days. Scales (except Black or Snow); Use 1 to 1 1/2 pints per 100 gallons or equivalent amount in concentrated spray. Apply as thorough coverage spray. The interval between last application and harvest is 45 days. Thrips; Use 1 to 2 quarts per acre in 5 to 10 gallons of water applied as a mist spray. The interval between last application and harvest is 15 days. Whiteflies; Use 3 to 4 pints per acre applied as a thorough distribution coverage spray. The interval between last application and harvest is 15 days. Do not apply during bloom period. Do not use on citrus seedlings. Make no more than 2 applications to mature fruit. Do not graze livestock in treated orchards.

**Citrus (Arizona and California) (Non-bearing and nursery stock):** Aphids, Thrips; Use 3 to 4 pints per acre as a foliar spray. Repeat applications as necessary. May be applied in the year grapefruit, lemon, orange, and tangerine trees begin to bear fruit. Do not graze livestock in treated groves. For soil drench (1-3 year old trees); Use 2 quarts per acre applied in the furrow or basin around the base of the tree. Apply when insect injury to new growth appears. Do not apply to trees that will bear fruit within one year. Do not graze livestock in treated groves.

**Pecans (21):** Aphids, Mites, Leafhoppers; Use 2/3 pint per acre. Do not graze livestock in treated groves.

#### **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.

**ALL APPLICABLE RESTRICTIONS, PRECAUTIONS, AND DIRECTIONS ON THE EPA REGISTERED PRODUCT LABEL MUST BE FOLLOWED**

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### APPLICATION THROUGH IRRIGATION SYSTEMS CHEMIGATION

Apply this product only through sprinkler, including center pivot, lateral move, end low side (wheel) roll, traveler, big gun, solid set, or hand move, flood (basin) furrow, border or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

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

Mix in clean supply tank the recommended amount of this product for acreage to be covered, and needed quantity of water.

This product should not be tank-mixed with other pesticides, surfactants or fertilizers unless prior use has shown the combination noninjurious under your conditions of use. Follow precautionary statements and directions for all tank-mix products.

On all crops, use sufficient gallonage of water to obtain thorough and uniform coverage, but not cause runoff or excessive leaching. This will vary depending on equipment, pest problem and stage of crop growth. Application of more or less than optimal quantity of water may result in decreased chemical performance, crop injury or illegal pesticide residues.

Meter this product into the irrigation water uniformly during the period of operation. Do not overlap application. Follow recommended label rates, application timing, and other directions and precautions for crop being treated.

Continuous mild agitation of pesticide mixture may be needed to assure a uniform application, particularly if the supply tank requires a number of hours to empty.

### CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

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

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves on average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a func-

tional reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

### SPRINKLER CHEMIGATION (FOLIAR SPRAY USES)

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

### FLOOD (BASIN) FURROW AND BORDER CHEMIGATION (SOIL DRENCH USES)

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

c. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### DRIP (TRICKLE) IRRIGATION

The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

BES