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Systems Integration Group, Inc.

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70051-5

4/14/99

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

APR 14 1999

Christine A. Dively
Director of Regulatory Affairs
Thermo Trilog Corporation
9145 Guilford Rd., Suite 175
Columbia, MD 21046

Subject: Revised label
Margosan-O
EPA Registration Number 70051-5
Your submission dated 4/1/99

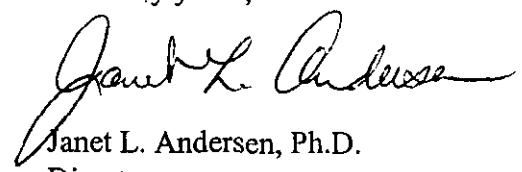
Dear Ms. Dively:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, is acceptable subject to the comments listed below:

Prior to your next label printing, you must include a discussion on diluting the product for tank mixing similar to text for your product 70051-2.

A stamped copy of the label is enclosed for your records. Please submit your revised label for our review prior to your next label printing. If you have any questions regarding this letter please contact Judy Loranger at 703-308-8056.

Sincerely yours,



Janet L. Andersen, Ph.D.
Director
Biopesticides and Pollution
Prevention Division (7511C)

CONCURRENCES

SYMBOL	7511C	751K					
SURNAME	Loranger	[Signature]					
DATE	4/12/99	4/13/99					

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Margosan-O® Master Label
Label Amendment, 3/99

MASTER LABEL

This master label bears directions for agricultural, commercial and homeowner use with various application rates specific to the associated container size.

MARGOSAN-O®
BOTANICAL INSECTICIDE CONCENTRATE

An Insecticide for Use on Vegetables, Ornamentals, Trees, Shrubs, Lawns, and Plants in and around Agricultural Areas, Commercial Nurseries, Greenhouses, Interiorscapes, and the Home

Botanical Agricultural Insecticide/Broad Spectrum Insect Growth Regulator Insecticide

Kills/repels a variety of insect pests including whiteflies, leafminers, caterpillars, aphids, and diamondback moths.

ACTIVE INGREDIENT:

Azadirachtin*.....	0.25%
INERT INGREDIENTS	99.75%
	TOTAL 100.00%

*Contains 0.017 pounds of azadirachtin per gallon.

KEEP OUT OF REACH OF CHILDREN
CAUTION

Manufactured By: Thermo Trilogy Corp.
9145 Guilford Road
Suite 175
Columbia, MD 21046

EPA Reg. No. 70051-5
EPA Est. NO. 44616-MO-01

Net Contents: 1 gal.

See Back Panel for Additional Precautionary Statements

ACCEPTED
with COMMENTS
In EPA Letter Dated

APR 14 1999
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
70051-5

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

CAUTION: Harmful if swallowed. Avoid contact with skin, eyes, or clothing. Avoid contamination of feed and foodstuffs. Avoid breathing spray mist. In case of eye contact, flush eyes with plenty of water. If on skin, wash with soap and water. If irritation persists, get medical attention.

Personal Protective Equipment:

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

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinylchloride (PVC) or Viton.
- Shoes plus socks.

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.

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:

Agricultural/Commercial Use

This product may be hazardous to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

Homeowner Use

Do not apply directly to water. Do not contaminate water when disposing of equipment washwaters or rinsate.

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Physical and Chemical Hazards:

Flammable. Do not use or store near heat or open flame.

STORAGE AND DISPOSAL

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

Pesticide Storage: Keep in original container. Store in a cool, dry place, away from direct sunlight, feed or foodstuffs. Keep container tightly sealed when not in use. Do not store below 60°F (15°C) or above 95°F (35°C).

Agricultural/Commercial Use

Pesticide Disposal: Rinsewater and unused diluted pesticide may be disposed of on-site or in an approved waste disposal facility. Do not reuse empty container. Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Homeowner Use

Pesticide and Container Disposal: Securely wrap original container in several layers of newspaper and discard in trash.

DIRECTIONS FOR USE

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

Agricultural/Commercial Use

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.

Homeowner Use

Keep unprotected persons out of treated areas until sprays have dried.

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 4 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 or butyl rubber or nitrile rubber or neoprene rubber or polyvinylchloride (PVC) or Viton.
- Shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep unprotected persons out of treated areas until spays have dried.

General

- Kills larval stages of insects only
- Broad Spectrum Multi-Purpose Botanical Insecticide Concentrate
- Kills and/or repels insects/Japanese beetles.
- For Indoor and Outdoor Use
- Formulated for interiorscape use.
- Shake well before using.
- Margosan-O® is most effective when applied 2-3 times in succession.

- Spraying directly onto the pest and a longer duration of leaf wetting increase effectiveness. Apply in early to mid-morning or late afternoon. This is particularly important with whitefly adults which are sedentary on the undersides of leaves at these times.
- Margosan-O® in diluted solution should be maintained at pH between 3-8. Use outside of this pH range may cause product degradation. Spray solutions should be used within several hours of preparation for maximum effectiveness. Do not store diluted solution for later use.
- Do not add adjuvants (spreaders, surfactants, etc.) to Margosan-O® as it already contains its own surfactant.
- Do not apply to wilted or otherwise stressed plants, or to newly transplanted material prior to root establishment. Do not apply to known spray-sensitive plants without testing.
- Margosan-O® has been found to be compatible when used in conjunction with most beneficial insects. It is recommended that a small trial be conducted to assure compatibility before using on a large scale.

Tank Mixing

Margosan-O® has been found to be compatible with most commonly used fungicides, insecticides, and fertilizers. Physical compatibility should first be checked by using the correct proportion of products in a small jar test. Growers should then test tank-mix combinations for phytotoxicity on a sample of plants prior to use. This is also recommended with combinations used before as environmental conditions can alter the interaction between compounds. *Due to the wide variation in climatic conditions, cultural practices, and other factors, the user assumes full responsibility for any crop damage or other liability resulting from the use of Margosan-O® in a tank mix combination.* Do not mix Margosan-O® with oxidizing agents such as bleach, or strong acids and bases as they will destabilize the product.

Commercial Use

General Use Directions for Ornamentals, Trees, Lawns, and Shrubs

- For use to control whiteflies, thrips, mealybugs, leafminers, loopers, caterpillars, beet armyworms, and aphids on bedding plants, potted plants, foliage plants, ornamentals, trees, and shrubs in and around greenhouses, commercial nurseries, and interiorscapes.
- For use to control gypsy moths, weevils, psyllids, webworms, hornworms, spruce budworms, and pine sawflies on trees and shrubs on commercial landscapes.
- Margosan-O® may be used on all listed fruits, vegetables, vegetable transplants, and herbs both inside and outside of the greenhouse.
- For high volume application, dilute Margosan-O® to a concentration of 64 to 128 ounces (4 to 8 pints) per 100 gallons of water (4 to 8 teaspoons of Margosan-O® per gallon of water). Mix thoroughly. Apply 25-40 psi with hand sprayer or 100-200-psi with power sprayer as a fine spray to both leaf surfaces to runoff. Usually 1-2 gallons of spray solution/1,000 sq. feet. Excessive application is unnecessary and should be avoided.

- For low volume application, apply at a rate of 0.5 gallon of Margosan-O® per 1000 square feet.
- Sprays may be applied on a preventative 7-day schedule or at the first sign of insect presence. This schedule is effective under low insect pressure. Under high insect pressure, apply every 3-4 days.
- For drench application in greenhouse planting, use 2.5 pints per 100 gallons and apply at the rate of 1 quart of diluted solution per square foot of growing media surface. Repeat at 14-day intervals during the growing season.

Directions for Repelling Japanese Beetles from Rose Plants

- For best results, apply to roses at the first sign of Japanese beetle emergence in early summer at the rate of 1 gallon of Margosan-O® per 100 gallons of water.
- Margosan-O® is more effective when used as a preventative.
- Spray to run-off, making sure to completely cover all parts of the plant, including buds and flowers.
- Repeat application weekly or after rainfall.
- More frequent applications may be necessary during periods of rapid plant growth, as new growth that occurs after application is not fully protected.
- Continue applications as long as adult beetles are present.
- Do not spray water directly onto foliage or otherwise wash off the leaves after treatment. This will reduce the effectiveness of the application.
- After initial application, some beetles may be present on foliage but they will not feed on it.

Directions for Sod, Lawns, and Turf

Effective scouting programs are important in determining the correct timing of the application of Margosan-O®. Margosan-O® is more effective when pest populations are at low to moderate levels and when insects are immature. Margosan-O® is most effective on young, immature insects. Applications should be made as soon as economic thresholds are observed in the field or timed to laying of new eggs and insect emergence. Insects usually die in 3 to 7 days. However, if populations are high or many adults are present, it is best to apply an adulticide either before or along with Margosan-O® to increase the potency of the treatment.

Margosan-O® may be applied in conventional application equipment with quantities of water sufficient to provide uniform coverage of the grass surfaces. The amount of water needed per acre depends on spray equipment, insect pressure, grass type, and experience. For best results, it is important to ensure uniform coverage of all treated surfaces.

Under higher insect pressure, use the **higher** label rates, shorten spray intervals, and/or increase spray volume to ensure complete coverage of all treated surfaces. Margosan-O® must be applied in such a manner to ensure a rate of between 5 and 20 grams azadirachtin (4-16 pints of Margosan-O®) per acre.

Do not apply Margosan-O® just before a rain; Margosan-O® needs four hours of drying on the grass for optimal effectiveness. Do not drench fields following application of Margosan-O®.

For best results, the application should be made either in early to mid-morning or in the late afternoon.

SURFACE-FEEDING INSECTS

For use to control cutworms, armyworms, sod webworms, crickets, chinch bugs, leafhoppers, and grasshoppers.

- Apply 1-2 gallons of Margosan-O® per acre (or 3-6 ounces per 1000 square feet) using enough spray volume to obtain thorough coverage, usually 50-100 gallons of diluted material per acre (or 1-2 gallons per 1000 square feet).
- Apply at first sign of pest emergence or damage. Reapply as necessary. Be sure to treat under shrubs and plants bordering house. Do not apply before it rains. Do not water turf for 2 days after application.

SUBSURFACE-FEEDING INSECTS

For use to control white grubs (Japanese beetles, European chafers, dung beetles, green June beetles, May/June beetles, annual white grubs, grub beetle, southern masked chafers, etc.), onion maggots, cabbage maggots, and crane flies.

- Apply 1-2 gallons of Margosan-O® per acre (or 3-6 ounces per 1000 square feet) using enough spray volume to obtain thorough coverage, usually 50-100 gallons of diluted material per acre (or 1-2 gallons per 1000 square feet).
- Turf should be mowed before application. Irrigate turf prior to application. Do not apply just before rain. Do not water turf within 24 hours after application. Do not mow turf within 2 days after application.

For use to control mole crickets.

- Apply 1-2 gallons of Margosan-O® per acre (or 3-6 ounces per 1000 square feet) using enough spray volume to obtain thorough coverage, usually 50-100 gallons of diluted material per acre (or 1-2 gallons per 1000 square feet).
- For best results, apply when nymphs are small, in the early spring. If necessary reapply at 1-2 week intervals.

For use to control billbugs.

- Apply 1-2 gallons of Margosan-O® per acre (or 3-6 ounces per 1000 square feet) using enough spray volume to obtain thorough coverage, usually 50-100 gallons of diluted material per acre (or 1-2 gallons per 1000 square feet).
- Apply in mid to late spring or at first sign of pest emergence or damage. Do not apply just before rain. Do not water turf for 2 days after application. Reapply as necessary. Repeat treatment in early to mid fall to control possible second generation.

Home Use

- For use on bedding plants, potted and foliage plants, ornamentals, trees, and shrubs in and around homes and other residential landscapes to control the immature or larval forms of insect pests.
- Also for use as a repellent against ants, cockroaches, and Japanese beetles.
- Dilute Margosan-O® at a rate of 3 fl oz or 6 tablespoons per gallon of water. For trees, plants, and shrubs, apply with a hand sprayer as a fine spray to leaf surfaces to run-off. Be sure to coat undersides of leaves as this is where many insects hide. Excessive application is unnecessary and should be avoided. Do not apply to known sensitive plants without a prior small-scale test application.
- Known sensitive plants:
 - African Violet flowers
 - Hibiscus flowers
 - Impatiens flowers

Specific Plant/Pest Directions

Directions for Repelling Japanese Beetles from Rose Plants

- For best results, apply to roses at the first sign of Japanese beetle emergence in early summer at the rate of 2.5 teaspoons of Margosan-O® per gallon of water.
- Margosan-O® is more effective when used as a preventative.
- Spray to run-off, making sure to completely cover all parts of the plant, including buds and flowers.
- Repeat application weekly or after rainfall.
- More frequent applications may be necessary during periods of rapid plant growth, as new growth that occurs after application is not fully protected.
- Continue applications as long as adult beetles are present.

- Do not spray water directly onto foliage or otherwise wash off the leaves after treatment. This will reduce the effectiveness of the application.
- After initial application, some beetles may be present on foliage but they will not feed on it.

Directions for Food Crop Application

General Directions

- Use care when applying near streams, ponds, lakes, or other bodies of water.
- Margosan-O® should not be applied when weather conditions favor drift or when the likelihood of runoff is high.

Specific Crop Directions

Application Rate: Apply 0.5-2.0 gallons of Margosan-O® per acre using conventional application equipment in a minimum of 30 gallons of water. The low rate should be used as a preventative when pest pressure is low, or if used in conjunction with adulticide products. Otherwise, the high rate should be used. The maximum application rate is 20 grams of active ingredient or less per acre according to the tolerance exemption (40 CFR 180.1119).

Application Rate for Whiteflies, Aphids, Leafminers, Armyworms & Other Pests

Pest	Rate of Margosan-O Per Acre* (gallons)	Application Frequency	Remarks
Sweetpotato Whitefly -Low Pressure -High Pressure	0.5-1.0 gallons	4 – 10 days	Foliar application to larvae and nymphs
	1.0-2.0 gallons	3 – 7 days	
Aphids	0.5-1.0 gallons	7 – 10 days	Suppression and adult feeding deterrence
Leafminer	0.5-1.0 gallons	14 – 21 days	Foliar application to larvae and nymphs
Armyworms	0.5-1.5 gallons	7 – 10 days	Foliar application to larvae
Others (including): -Bores -Leafhoppers -Leafrollers -Loopers	1.0-2.0 gallons	7 – 10 days	Foliar application to larvae and nymphs

*Apply in sufficient water per acre to assure adequate coverage

Mode of Action

This product controls targeted insect larvae when ingested or come in contact with it, by interfering with the insects ability to molt. It is effective on all larval stages and pupae. It also reduces damage by repelling and deterring feeding of all stages of insects.

Crops including but not limited to:

CITRUS, POME, STONE, AND TROPICAL FRUITS	
Apples	Apricots
Avocados	Peaches
Pears	Oriental pears
Cherries-sweet	Cherries-sour
Barbados cherries	Plums
Prunes	
Crabapples	Quinces
Grapefruits	Jujubes
Kumquats	
Lemons	
Limes	
Mangoes	
Nectarines	
Oranges	
CUCURBITS	
Balsam pears	Honeydew melons
Mango	
Cantaloupes	Chinese waxgourds
Pumpkins	
Cucumbers	Squashes
Gherkins	Watermelons (incl. hybrids)
Gourds	
BULB, COLE AND LEAFY VEGETABLES	
Arugula	
Asparagus	Cress
Broccoli	Endive
Brussels sprouts	Fennel
Cabbage (head & Leaf)	Kale
Cauliflower	Kohlrabi
Celery	Parsley
Lettuce (head & leaf)	Rhubarb
Mustard greens	Swiss chard
(Gai Ion)	Turnip tops
Chinese cabbage	Garlic
(Bok choy, Napa)	Leek
Spinach	Onions
Chinese spinach	Shallots
(Amaranth, Tampala)	Collards
LEGUME AND FRUITING VEGETABLES	
Beans	
Chick peas	
Eggplants	
Ground cherries	

Lentils
Peas
Peanuts
Peppers
Soybeans
Tomatoes

ROOT AND TUBER VEGETABLES

Artichokes	Tumeric
Beets	Turnips
Carrots	Yams
Cassava	Yam beans
Ginger	
Horseradish	
Parsnips	
Potatoes	
Radishes	
Rutabaga	
Sweet potatoes	

SMALL FRUITS AND BERRIES

Blackberries
Blueberries
Boysenberries
Cranberries
Currents
Dewberries
Elderberries
Gooseberries
Grapes
Huckleberries
Loganberries
Raspberries (black & red)
Strawberries
Youngberries

HERBS AND SPICES

Anise	Mint
Balm	Marigold
Basil	Marjoram
Borage	
Camomile	Pennyroyal
Caraway	Peppermint
Catnip	Rosemary
Chives	Rue

Celery	Sage
Coriander	Savory
Cumin	Spearmint
Curry leaf	Sweet Bay
Dandelion	Tarragon
Dill	Thyme
Fennel	Wintergreen



NUTS

Almonds
Beech nuts
Brazil nuts
Butternuts
Cashews
Chestnuts
Filberts
Hickory nuts
Macadamia
Pecans
Pistachios
Walnuts

MISCELLANEOUS

Asparagus	Sweet corn
Cotton	
Rice	

Margosan-O® Master Label
Label Amendment, 3/99

**Insect Pest Controlled by
Margosan-O®:**

Aphids, such as:

Cotton Aphid
Green Peach Aphid

Armyworms, such as:

Beet Armyworm
Fall Armyworm
Southern Armyworm
Yellow Striped
True Armyworm

Borers, such as:

Peachtwig Borer
Peachtree Borer
Squash Vineborer

**Caterpillars & Loopers,
such as:**

Cabbage Looper
Diamond Moth
Imported Cabbage Looper
Navel Orangeworm
Soybean Looper
Tobacco Budworm
Tomato Fruitworm
Grapeleaf Skeletonizer
Hornworm
Fall Webworm
Lesser Webworm
Pickleworm
Rindworm
Melonworm
Sod Webworm
Pecan Nut Casebearer
Walnut Caterpillar
Hickory Shuckworm

Corn Earworm

Budworm
Webworm
Garden Webworm

Cutworms, such as:

Black Cutworm
Citrus Cutworm

Leafhoppers, such as:

Grape Leafhopper
Potato Leafhopper
Variegated Leafhopper
Aster Leafhopper

Leafminers, such as:

Holly Leafminer
Sepentine Leafminer
Vegetable Leafminer

Leafrollers, such as:

Oblique Banded Leafroller
Omniverous Leafroller
Grape Leafroller
Fruitree Leafroller
Blueberry Leafroller
Filbert Leafroller

Moths, such as:

Artichoke Plume Moth
Codling Moth
Gypsy Moth
Diamondback Moth
Grape Berry Moth

Thrips, such as:

Thrips Palmi

Whiteflies, such as:

Greenhouse Whitefly
Silverleaf Whitefly
Sweetpotato Whitefly

Psyllids

Spittle Bugs

Mealybugs

**Beetles, Grubs & Weevils,
such as:**

Pecan Weevils
Alfalfa Weevils
Chestnut Weevils
Colorado Potato Beetle
Black Vine Weevil
Twig Girdlers
Strawberry Beetle
Potato Flea Beetle
Bean Leaf Beetle
Mexican Bean Beetle

Miscellaneous, such as:

Fruitfly
Grasshopper
Onion Maggot
Tomato Pinworm
Cherry Fruitworm
Grape Fruitworm
Grape Leafroller
Filbert Worm
Squash Bug
Pecan Leaf Phylloxera
Pecan Stem Phylloxera
Bollworm
Cotton Leafperforator

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CHEMIGATION

Refer to supplemental labeling entitled "Thermo Trilogy's Chemigation Bulletin" for use directions for chemigation. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed. For a copy of this bulletin, please call Thermo Trilogy's Customer Service.

WARRANTY

Thermo Trilogy Corp. warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

Chemigation Bulletin

GENERAL INFORMATION:

Apply this product only through drip (trickle); sprinkler (solid set, lateral move, end tow, side-roll, center pivot, or hand move); flood (basin); furrow; or border 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, 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.

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

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

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

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

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

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

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

DRIP TRICKLE CHEMIGATION:

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

- 5. 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.
- 6. Systems must use a metering pump such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply to moderately moist soils. Use volumes that thoroughly wet the soil but that do not cause significant runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.

- water pressure decreases to the point where pesticide distribution is adversely affected.
- 6. Systems must use a metering pump, such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply when soils are moderately moist. Use volumes that thoroughly wet the foliage and/or soil but that do not cause significant runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.
- 8. Do not apply when wind speed favors drift beyond the area intended for treatment.

SPRINKLER CHEMIGATION:

- 1. 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.
- 2. The pesticide injection pipeline must also contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 3. 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.
- 4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the

FLOOD (BASIN), FURROW AND BORDER CHEMIGATION:

- 1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential of water source contamination from the backflow if water flow stops.
- 2. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
 - a. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
 - b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
 - c. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump

- and connected to the system interlock to prevent fluid from being withdrawn - from the supply tank when the irrigation system is either automatically or manually shut down.
- d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
 - e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
 - f. Systems must use a metering pump, such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
3. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or *other appropriate tank-mixed agricultural* chemicals. Agitation is necessary. Apply to moderately moist soils. Use volumes that thoroughly wet the soil but that do not cause significant runoff. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.

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