

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

AUG 05 1999

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

Subject: Master label and Sublabel Revisions
SUPERNEEM 4.5 - B Botanical Insecticide
SUPERNEEM 4.5 - B Agriculture Sublabel
SUPERNEEM 4.5 - B Commercial Sublabel
EPA Reg. No. 70051-9
Your submission dated June 7, 1999

Dear Ms. Dively:

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

Master Label (SUPERNEEM 4.5 - B Botanical Insecticide)

You must retain the following statement that is currently on your last stamped accepted label for this product:

"Not for use in food handling establishments."

A stamped copy of the label is enclosed for your records. Please submit five (5) copies of the finished label.

Sublabels (SUPERNEEM 4.5 - B Agricultural Sublabel and SUPERNEEM 4.5 B Commercial Sublabel)

1. Although the Agency does not stamp sublabels, we have reviewed your SUPERNEEM 4.5 - B Commercial Sublabel and find that the tables listing food crops (citrus, pome and stone fruit, cucurbits, bulb, cole and leafy vegetables, legume and fruiting vegetables, root and tuber vegetables, small fruits and berries, herbs and spices, nuts, cotton, alfalfa and corn) must be deleted because this sublabel does not contain use directions for these crops. Please provide copies of the revised sublabel.

CONCURRENCES

SYMBOL							
SURNAME		Reilly					
DATE		7/30/99					

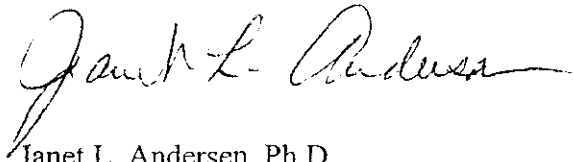
2. Your SUPERNEEM 4.5 B Agricultural Sublabel is acceptable.
3. Please provide the homeowner sublabel for our review.

Recommendation to revise labels to an all table format

Your product labels would be improved by replacing your text use directions (dilution and application) with tables. Although we will not require you to make these revisions at this time, this issue may be addressed in the upcoming registration renewal process for azadirachtin products.

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)

ACCEPTED with COMMENTS In EPA Label Dated

MASTER LABEL AUG 05 1999

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

Thermo Trilogy Corporation

SUPERNEEM 4.5-B BOTANICAL INSECTICIDE

70051-9

BROAD SPECTRUM INSECTICIDE

BOTANICAL AGRICULTURAL INSECTICIDE/INSECT GROWTH REGULATOR

An Insecticide for Use on Vegetables, Fruits, Ornamentals, Trees, Shrubs, Lawns, and Plants In the Field and In and Around Commercial Nurseries, Greenhouses, Interiorscapes, and the Home.

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

ACTIVE INGREDIENT:

Azadirachtin.....	4.5%
INERT INGREDIENTS.....	95.5%
TOTAL	100.00%

This product contains 0.34 lb of azadirachtin per US 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).

EPA Reg. No. 70051-9 EPA Est. No. 44616-MO-01
Net Contents: 1 qt.

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

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear goggles and/or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse. 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.

STATEMENT OF PRACTICAL TREATMENT

IF IN EYES: Hold eyelids open and flush with a steady, gentle stream of water for 15 minutes. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention if irritation persists.

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
- Protective Eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not re-use them.

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

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

PHYSICAL AND CHEMICAL HAZARDS

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 50°F (10°C) or above 95°F (35°C).

Agricultural/Commercial

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, if allowed by state and local authorities by burning. If burned, stay out of smoke.

Homeowner: Securely wrap original container in several layers of newspaper and discard in trash.

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DIRECTIONS FOR USE

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

Agricultural/Commercial

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

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 12 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.
- Protective Eyewear

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 area until sprays have dried.

General

- Broad Spectrum Insect Growth Regulator Insecticide
- Shake well before using.
- Kills larval stages of insects only
- Botanical insecticide concentrate
- Formulated for interiorscape use
- For Indoor and Outdoor Use
- Spraying directly onto the pest and a longer duration of leaf wetting increases 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.
- SUPERNEEM 4.5-B 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 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.
- SUPERNEEM 4.5-B 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.
- Use with care when applying near streams, ponds, lakes or bodies of water.
- Superneem 4.5-B should not be applied when weather conditions favor drift or the likelihood of runoff is high.

TANK MIXING

Superneem 4.5-B Botanical Agricultural Insecticide 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 SUPERNEEM 4.5-B in a tank mix combination.* Do not mix SUPERNEEM 4.5-B with oxidizing agents such as bleach, or strong acids and bases as they will destabilize the product.

**GENERAL DIRECTIONS FOR
INTERIORSCAPES, PLANTS, LANDSCAPES,
ORNAMENTALS, TREES, LAWNS,
GREENHOUSES 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, interiorscapes, and homes.
- For use to control gypsy moths, weevils, psyllids, webworms, hornworms, spruce budworms, tent caterpillars and pine sawflies on trees and shrubs on residential and commercial landscapes.
- SUPERNEEM 4.5-B may be used on all fruits, vegetables, vegetable transplants, and herbs both inside and outside of the greenhouse.
- Dilute SUPERNEEM 4.5-B at 3.5 to 8.0 ounces per 100 gallons of water (1/4 to 1/2 teaspoon of SUPERNEEM 4.5-B per gallon of water). Mix thoroughly. Apply at 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 0.5 pint of SUPERNEEM 4.5-B per acre in sufficient water to provide adequate coverage.
- 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 applications in greenhouse plantings, use 2.25 ounces 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.

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 0.5 pint of SUPERNEEM 4.5-B per 100 gallons of water.
- SUPERNEEM 4.5-B 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 LAWNS AND TURF

Surface-Feeding Insects: For use to control cutworms, armyworms, sod webworms, crickets, chinch bugs, leafhoppers, and grasshoppers.

- Apply 0.5-1.0 pint of SUPERNEEM 4.5B per acre (or 0.17-0.33 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 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 beetles, southern masked chafers, etc.) and crane flies.

- Apply 0.5-1.0 pint of SUPERNEEM 4.5B per acre (or 0.17-0.33 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).
- Application should be made soon after adults emerge in summer (1-3 weeks after first sign of adults). Turf should be mowed before application. Irrigate turf prior to application. Do not water turf within 24 hours after application. Do not mow turf within 3 days after application.

Subsurface-Feeding Insects: For use to control mole crickets.

- Apply 0.5-1.0 pint of SUPERNEEM 4.5B per acre (or 0.17-0.33 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.

Subsurface-Feeding Insects: For use to control billbugs.

- Apply 0.5-1.0 pint of SUPERNEEM 4.5B per acre (or 0.17-0.33 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 before it rains. Do not water turf for 2 days after application. Reapply as necessary. Repeat treatment in early to mid fall to control possible second generation.

DIRECTIONS FOR FOOD CROP APPLICATION

General Directions

- Use care when applying near streams, ponds, lakes or other bodies of water.
- SUPERNEEM 4.5-B should not be applied when weather conditions favor drift or when the likelihood of runoff is high.

Specific Crop Directions

Application Rate: Apply 0.25-1 pint (4.0-16.0 oz) of SUPERNEEM 4.5-B per acre using suitable ground or aerial application equipment, in a manner to obtain uniform and complete plant coverage. For agronomic crops apply using conventional ground application equipment in a minimum of 30 gallons of water and aerial application equipment in a minimum of 3 gallons of water. Avoid over-spraying to the point of excessive runoff. Refer to table for application rates. The low rate should be used as a preventative when pest pressure is low, or if used in conjunction with adjuvants. Otherwise, the high rate should be used. The maximum application rate is 20 grams active ingredient or less per acre according to the tolerance exemption (40 CFR 180.1119).

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

Pest	Rate SUPERNEEM 4.5-B Per Acre (ounces)*	Frequency	Remarks
Sweetpotato Whitefly			
Low Pressure	4.0 - 7.0 oz.	4 - 10 days	Foliar application to larvae and nymphs
High Pressure	8.0 - 16.0 oz.	3 - 7 days	
Aphids	5.0 - 7.0 oz.	7 - 10 days	Suppression and adult feeding deterrence
Leafminer	4.0 - 7.0 oz.	14 - 21 days	Foliar application to larvae and nymphs
Armyworms	4.0 - 10.0 oz.	7 - 10 days	Foliar application to larvae
Others (including):	7.0 - 16.0 oz.	7 - 10 days	Foliar application to larvae and nymphs
Bores			
Leafhoppers			
Leafrollers			
Loopers			

*apply in sufficient water to obtain adequate plant 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 insect.

Crops including but not limited to:

CITRUS, POME AND STONE FRUITS		
Grapefruits	Crabapples	Nectarines
Kumquats	Pears	Peaches
Lemons	Quinces	Plums
Limes	Jujubes	Prunes
Oranges	Apricots	Apples
Cherries	Avocado	
CUCURBITS		
Balsam pears	Gherkins	Mangoes
Gourds	Pumpkins	Chinese wax-gourds
Cantaloupes	Squashes	Honeydew melons
Watermelons	Cucumbers	
BULB, COLE AND LEAFY VEGETABLES		
Broccoli	Cress	Rhubarb
Brussels sprouts	Endive	Spinach
Bok choy	Fennel	Swiss chard
Cabbage	Kale	Turnip tops
Cauliflower	Kohlrabi	Garlic
Chinese spinach	Lettuce	Leek
Celery	Mustard greens	Onions
Collards	Parsley	Shallots
Asparagus	Arugula	
LEGUME AND FRUITING VEGETABLES		
Beans	Peanuts	Ground cherries
Chick peas	Soybeans	
Lentils	Eggplants	Peas
Peppers	Tomatoes	
ROOT AND TUBER VEGETABLES		
Artichokes	Horseradish	Sweet potatoes
Beets	Parsnips	Tumeric
Carrots	Potatoes	Turnips
Cassava	Radishes	Yams
Ginseng		
Ginger	Rutabaga	Yam beans

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SMALL FRUITS AND BERRIES		
Blackberries	Dewberries	Loganberries
Blueberries	Elderberries	Raspberries
Boysenberries	Gooseberries	Strawberries
Cranberries	Grapes	Youngberries
Currants	Huckleberries	
HERBS AND SPICES		
Anise	Cumin	Rosemary
Balm	Curry leaf	Rue
Basil	Dandelion	Sage
Borage	Dill	Savory
Camomile	Fennel	Spearmint
Caraway	Mint	Sweet bay
Catnip	Marigold	Tarragon
Chives	Marjoram	Thyme
Celery	Pennyroyal	Wintergreen
Coriander	Peppermint	
NUTS		
Almonds	Cashews	Macadamias
Beech nuts	Chestnuts	Pecans
Brazil nuts	Filberts	Pistachios
Butternuts	Hickory nuts	Walnuts
MISCELLANEOUS		
Cotton	Alfalfa	Corn
	Other crops grown for seed	Sweet Corn

Insect Pest Controlled by SUPERNEEM 4.5-B:

Aphids, such as:

- Cotton Aphid
- Green Peach Aphid
- Black Maringed Aphid
- Filbert Aphid

Armyworms, such as:

- Beet Armyworm
- Fall Armyworm
- Southern Armyworm
- Yellow Striped Armyworm

Borers, such as:

- Peachtwig Borer
- Peachtree Borer
- Squash Vine Borer

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 Webworms
- Pickleworm
- Rindworm
- Melonworm
- Sod Webworm
- Pecan Nut Casebearer
- Walnut Caterpillars
- Hickory Shuckworms
- Corn Earworms
- Budworms
- Garden Webworm
- Tomato Pinworm
- Grapefruit Worm
- Filbert Worms

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
- Omnivorous 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
- Chestnut Weevils
- Colorado Potato Beetle
- Black Vine Weevil
- Twig Girdlers
- Strawberry Beetle
- Potato Flea Beetle
- Mexican Bean Beetle
- Bean Leaf Beetle
- Flea Beetle
- Bollweevil

Miscellaneous, such as:

Fruitfly

- Grasshopper
- Squash Bug
- Cabbage Maggot
- Onion Maggot
- Cherry Fruitworm
- Grape Leafroller
- Pink Bollworm
- Lygus Bug
- San Jose Scales
- Calico Scales
- Frosted Scales
- Pecan Leaf Phylloxera
- Pecan Stem Phylloxera

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.

Thermo Trilogy Corporation
9145 Guilford Road
Suite 175
Columbia, MD 21046

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 non-uniform 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.
 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 water pressure decreases to the point where pesticide distribution is adversely affected.

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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