

70051-9

12/01/2009

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

December 1, 2009

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Christine A. Dively
Director of Regulatory Affairs
Certis USA, LLC
9145 Guilford Road, Suite 175
Columbia, MD 21046

RE: Product Name: Superneem 4.5-B
EPA Reg. No: 70051-9
Application for Label Notification Dated November 13, 2009 which
supersedes the October 28, 2009 Notification to update storage and
disposal and warranty statements

Dear Ms.Dively:

The Biopesticides and Pollution Prevention Division is in receipt of your application for Notification under Pesticide Registration (PR) Notice 98-10 dated above. A preliminary screen of this request has been conducted for its applicability under PR Notice 98-10 and it has been determined that the action(s) requested falls within the scope of PR Notice 98-10. Our records have been duly noted, and the label submitted with this application has been stamped "Notification, received and reviewed" and will be placed accordingly in our records.

If you have any questions concerning this action, please feel free to contact Ms. Menyon Adams at (703) 347-8496 or email at adams.menyon@epa.gov.

Sincerely,

Linda Hollis

Linda Hollis, Chief
Biochemical Pesticides Branch
Biopesticides and Pollution Prevention
Division (7511P)

MASTER LABEL

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

Superneem 4.5-B

INSECT GROWTH REGULATOR

 **FOR ORGANIC PRODUCTION**



An Insecticide for Use on Vegetables, Fruits, Ornamentals, Trees, Shrubs, Lawns, Turf, and Plants In the Field and In and Around Commercial Nurseries, Greenhouses, Interiorscapes, Mushroom Houses, and the Home. Kills/repels a variety of insect pests including whiteflies, loopers, caterpillars, leafminers, aphids, and diamondback moths.

ACTIVE INGREDIENT:
Azadirachtin4.5%
OTHER INGREDIENTS95.5%
TOTAL100.0%
This product contains 0.34 lb. of azadirachtin per US gallon.

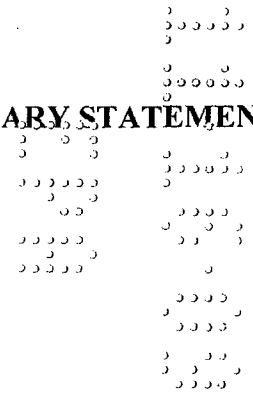
KEEP OUT OF REACH OF CHILDREN
WARNING AVISO
Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail).

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

Manufactured by
Certis USA, L.L.C.
9145 Guilford Road
Suite 175
Columbia, MD 21046



SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND FIRST AID



**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. Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Harmful if inhaled. Avoid breathing spray mist. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

FIRST AID

If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Hot Line Number: 1-800-255-3924.

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 is hazardous to fish and aquatic invertebrates. For terrestrial uses: 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 disposing of equipment washwaters or rinsate.

Homeowner

To protect the environment, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

PHYSICAL OR CHEMICAL HAZARDS

Combustible: Do not use 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.

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.

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.

For early entry into 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, wear:

- 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 areas until sprays have dried.

GENERAL

- Broad Spectrum Insect Growth Regulator Insecticide
- Not for use in food-handling establishments.
- 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.
- The pH of spray solution containing Superneem 4.5-B must be kept between 3 and 8. Use spray solutions 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. Conduct a small trial to assure compatibility before using on a large scale.
- Use with care when applying near streams, ponds, lakes or bodies of water.
- Do not apply SUPERNEEM 4.5-B when weather conditions favor drift or the likelihood of runoff is high.

TANK MIXING
 SUPERNEEM 4.5-B, Insect Growth Regulatory, has been found to be compatible with most commonly used fungicides, insecticides, and fertilizers. Check physical compatibility first by using the correct proportion of products in a small jar test. Then, test tank-mix combinations for phytotoxicity on a sample of plants prior to use. This must be done 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.

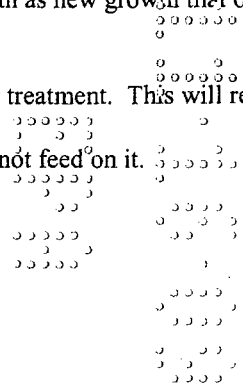
GENERAL DIRECTIONS FOR INTERIORSCAPES, PLANTS, LANDSCAPES, ORNAMENTALS, TREES, LAWNS, GREENHOUSES AND SHRUBS

- 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 fluid 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. Use 1-2 gallons of spray solution/1,000 sq. feet. Avoid excessive application.
- For low volume application, apply 0.5 pint of SUPERNEEM 4.5-B per acre in sufficient water to provide adequate coverage.
- Apply sprays 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 fluid 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, after rainfall or 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 1.0 quart-2.0 gallons of SUPERNEEM 4.5-B per acre (0.75-6.0 fluid ounces per 1000 square feet) using enough spray volume to obtain thorough coverage. Use 2-5 gallons of diluted material per 1000 square feet Use 50-100 gallons of diluted material per acre.
- Apply at first sign of pest emergence or damage to turf. The treated area may be lightly irrigated for 3-5 minutes after application if desired to increase penetration of turf surface. Reapply as needed to maintain control of turf damage. 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 beetles, southern masked chafers, etc.) and crane flies.

- Apply 1.0 quart-2.0 gallons of SUPERNEEM 4.5-B per acre (0.75-6.0 fluid ounces per 1000 square feet) using enough spray volume to obtain thorough coverage. Use 50-100 gallons of diluted material per acre. Use 2-5 gallons of diluted material per 1000 square feet.
- Make application soon after adults emerge in summer (1-3 weeks after first sign of adults). Mow turf 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 1.0 quart-2.0 gallons of SUPERNEEM 4.5-B per acre (0.75-6.0 fluid ounces per 1000 square feet) using enough spray volume to obtain thorough coverage. Use 2-5 gallons of diluted material per 1000 square feet. Use 50-100 gallons of diluted material per acre.
- 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 1.0 quart-2.0 gallons of SUPERNEEM 4.5-B per acre (0.75-6.0 fluid ounces per 1000 square feet) using enough spray v Apply 1.0 quart-2.0 gallons of SUPERNEEM 4.5-B per acre (0.75-6.0 fluid ounces per 1000 square feet) using enough spray volume to obtain thorough coverage. Use 50-100 gallons of diluted material per acre. Use 2-5 gallons of diluted material per 1000 square feet. Reapply as necessary.
- 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.

For Nematode Suppression:

- Apply 1.0 quart-2.0 gallons of SUPERNEEM 4.5-B per acre (0.75-6.0 fluid ounces per 1000 square feet) using enough spray v Apply 1.0 quart-2.0 gallons of SUPERNEEM 4.5-B per acre (0.75-6.0 fluid ounces per 1000 square feet) using enough spray volume to obtain thorough coverage. Use 50-100 gallons of diluted material per acre. Use 2-5 gallons of diluted material per 1000 square feet. Reapply as necessary.

DIRECTIONS FOR FOOD CROP APPLICATION

General Directions

- Use care when applying near streams, ponds, lakes or other bodies of water.
- Do not apply SUPERNEEM 4.5-B 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 fluid 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. Use the low rate as a preventative when pest pressure is low, or if used in conjunction with adulticide products. Otherwise, use the high rate. 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* (fluid ounces)	Frequency	Remarks
Sweetpotato Whitefly			
Low Pressure	4.0 – 7.0 fluid oz.	4 – 10 days	Foliar application to larvae and nymphs
High pressure	8.0 – 16.0 fluid oz.	3 – 7 days	
Aphids	5.0 – 7.0 fluid oz.	7 – 10 days	Suppression and adult feeding deterrence
Leafminer	4.0 – 7.0 fluid oz.	14 – 21 days	Foliar application to larvae and nymphs
Armyworms	4.0 – 10.0 fluid oz.	7 – 10 days	Foliar application to larvae
Others (including)			
Borers	7.0 – 16.0 fluid oz.	7 – 10 days	Foliar application to larvae and nymphs
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.

CITRUS, POME AND STONE FRUITS

Crops (including, but not limited to)

Apples	Grapefruits	Nectarines	Prunes
Apricots	Jujubes	Oranges	Quinces
Avocado	Kumquats	Peaches	
Cherries	Lemons	Pears	
Crabapples	Limes	Plums	

CUCURBITS

Crops (including but not limited to)

Cotton	Sweet Corn	Alfalfa	Corn
Other crops grown for seed			
Mushrooms			

DIRECTIONS FOR MUSHROOMS

Compost Treatment – Post Pasteurization – After compost has cooled, but prior to broadcasting spawn, dilute 2-4 ounces of SUPERNEEM 4.5-B with 25 gallons of water, mix thoroughly, apply as a fine spray over compost surface. (25 gallons treats 1000 sq.ft.).

Post Planting (Spawning Treatment) – Dilute 1-2 oz. of SUPERNEEM 4.5-B with 25 gallons of water, mix thoroughly, and apply as a fine spray to the surface (25 gallons treats 1000sq.ft.).

Casing Layer Treatment – Beginning 3 days after casing, dilute 1/2 - 1 oz. of SUPERNEEM 4.5-B with 25 gallons of water, mix thoroughly, apply as a fine spray to the surface (25 gallons treats 1000sq. ft.). Repeat every 7-10 days.

INSECT PESTS CONTROLLED BY SUPERNEEM 4.5-B

Aphids: Cotton Aphid Green Peach Aphid Black Maringed Aphid Filbert Aphid	Rindworm Melonworm Sod Webworm Pecan Nut Casebearer Walnut Caterpillars Hickory Shuckworms Corn Earworms	Leafrollers: Oblique Banded Leafroller Omniverous Leafroller Grape Leafroller Fruitree Leafroller Blueberry Leafroller Filbert Leafroller	Beetles, Grubs and Weevils: 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
Armyworms: Beet Armyworm Fall Armyworm Southern Armyworm Yellowstriped Armyworm	Budworms: Garden Webworm Tomato Pinworm Grapefruit Worm Filbert Worms	Moths: Artichoke Plume Moth Codling Moth Gypsy Moth Diamondback Moth Grape Berry Moth	Miscellaneous: 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 Squash and Phorid Flies
Borers: Peachtwig Borer Peachtree Borer Squash Vine Borer	Cutworms: Black Cutworm Citrus Cutworm	Thrips: Thrips Palmi	
Caterpillars & Loopers: Cabbage Looper Diamond Moth Imported Cabbage Looper Navel Orangeworm Soybean Looper Tobacco Budworm Tomato Fruitworm Grapeleaf Skeletonizer Hornworm Fall Webworm Lesser Webworm Pickleworm	Leafhoppers: Grape Leafhopper Potato Leafhopper Variegated Leafhopper Aster Leafhopper	Whiteflies: Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	
	Leafminers: Holly Leafminer Sepentine Leafminer Vegetable Leafminer	Psyllids Spittle Bugs Mealybugs	

CHEMIGATION

Refer to supplemental labeling entitled "Certis'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.

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: Wastes resulting from the use of this product must be disposed of on-site or in an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling, if available 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.

Homeowner:

Disposal Instructions:

If empty: Nonrefillable container. Do not reuse or refill this container. Place in trash or offer for recycling if available.

If partly filled: Call your local solid waste agency or 1-800-CLEANUP for disposal instructions. Never place unused product down any indoor or outdoor drain.

WARRANTY

Certis USA, L.L.C. 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, sideroll, 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, discharge the water from the public water system 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 application rate evenly to the entire treated area.

SPRINKLER CHEMIGATION:

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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.
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 application rate evenly to the entire treated area.
8. Do not apply when wind speed favors drift beyond the area intended for treatment.

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 application rate evenly to the entire treated area.