

Neemix[®] 4.5

INSECT GROWTH REGULATOR

BIOLOGICAL INSECTICIDE

An Insecticide for Use on Vegetables, Fruits, Turf (Including Commercial Lawns), and other Crops Grown in the Field or Mushroom Houses. Kills/repels a variety of insect pests including whiteflies, loopers, caterpillars, leafminers, psyllids, mealybugs, and larvae of diamondback moths.

CAN BE USED IN ORGANIC PRODUCTION

ACTIVE INGREDIENT:

Azadirachtin.....

4.5%

OTHER INGREDIENTS:

TOTAL.....

95.5%

100.0%

This product contains 0.39 lb. (175 g) of azadirachtin per US gallon

KEEP OUT OF REACH OF CHILDREN CAUTION

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

See attached booklet for additional Precautionary Statements, First Aid Statements, Directions for Use, and Storage and Disposal Statements.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store above 100°F or below -20°F for extended periods of time. Keep containers tightly closed when not in use.

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

CONTAINER HANDLING: Non-refillable 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.

This is a Specimen Label. It may not reflect the most-recent approved label for use in your state. Always refer to the label on the product packaging for approved use instructions. Please contact your Certis sales representative for more information.



**Net Contents: One Quart
or 32 fl. oz. (946mL)**

Lot Number:

EPA Reg. No. 70051-9

EPA Est. No. 70051-CA-001

Item: 168600

Package: 568589

20191122

ESL 20160318

Manufactured for:

Certis USA, L.L.C.

9145 Guilford Road

Suite 175

Columbia, MD 21046



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.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

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

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, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (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

This product may be 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.

PHYSICAL AND 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.

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 workers entry into treated areas during the restricted entry interval (REI) of 4 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, butyl rubber, nitrile rubber, neoprene rubber, 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 Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or greenhouses. For other uses including golf courses, and other non-agricultural uses, do not enter treated areas without protective clothing until sprays have dried.

PREHARVEST INTERVAL

NEEMIX® 4.5 can be applied up to and including the day of harvest (zero PHI). Individual state regulations may vary and should be consulted for allowable preharvest interval.

MODE OF ACTION

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

SPRAY EQUIPMENT

Use any suitable ground, aerial, or hand application equipment that allows for uniform coverage of the targeted treatment area.

GENERAL INFORMATION

- Broad Spectrum Insect Growth Regulator Insecticide
- Not for use in food-handling establishments.
- Shake well before using.
- Kills only immature stages (larvae or nymphs) of insects. Treated larvae may die as pupae.
- Make applications when pests first appear and are in their early larval stages. Repeat applications every 7 days or as needed.
- Botanical Insecticide Concentrate.
- 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 NEEEMIX® 4.5 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.
- NEEEMIX® 4.5 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 NEEEMIX® 4.5 when weather conditions favor drift or the likelihood of runoff is high.
- For best results, add a spreader-sticker or oil-based adjuvant (such as methylated seed oil) at the label rate.
- Do not use on Comice Pears and other known sensitive pear varieties.

This product may be pre-mixed in a supply tank with water, fertilizer or other appropriate agricultural chemicals. Agitation is necessary (see Mixing Directions). Crop injury or lack of effectiveness can result if uniform distribution is not achieved. When pest populations are high, use the higher label rates.

TANK MIXING

NEEMIX® 4.5 Insect Growth Regulator, 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 NEEEMIX® 4.5 in a tank mix combination.* Do not mix NEEEMIX® 4.5 with oxidizing agents such as bleach, or strong acids and bases as they will destabilize the product.

DIRECTIONS FOR USE ON FIELD-GROWN FOOD CROPS

GENERAL DIRECTIONS:

Use care when applying near streams, ponds, lakes or other bodies of water.

Do not apply NEEEMIX® 4.5 when weather conditions favor drift or when the likelihood of runoff is high.

SPECIFIC CROP/PEST DIRECTIONS:

Application Rate: Apply 0.25 – 1 pint (4 – 16 fl. oz.) of NEEEMIX® 4.5 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 the table below for application rates against selected pests. 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 Rates for Whiteflies, Aphids, Leafminers, Worms, and Other Pests

Pest	Rate of Neemix® 4.5 Per Acre*	Frequency	Remarks
Whiteflies: Low Pressure High Pressure	4 – 7 fl. oz. 8 – 16 fl. oz.	4 – 10 days 3 – 7 days	Foliar application against nymphs
Aphids	5 – 7 fl. oz.	7 – 10 days	Suppression of nymphs and adult feeding deterrence
Leafminer (<i>Liriomyza</i> spp. and Citrus Leafminer, <i>Phyllocnistis citrella</i>)	4 – 7 fl. oz.	14 – 21 days	Foliar application against larvae and nymphs
Lepidoptera larvae (caterpillars or worms) feeding on foliage or fruit	4 – 10 fl. oz.	7 – 10 days	Foliar application against larvae
Others (including): Borers, Leafhoppers, Leafrollers, Loopers	7 – 16 fl. oz.	7 – 10 days	Foliar application against larvae or nymphs

*Apply in sufficient water to obtain adequate plant coverage, typically 30 – 100 gallons per acre by ground or 3 – 5 gallons per acre by air.

For Use on Vegetables, Melons, Strawberries, and Other Food Crops Grown in Greenhouses (or other cover) for Transplanting to Production Fields. For Use on Bearing and Nonbearing Fruit and Nut Trees, Grapevines, Caneberries, and Other Small Fruits.

Apply NEE MIX® 4.5 at the indicated rates in sufficient water to ensure adequate plant coverage. Use 1-2 gallons of spray solution per 1,000 square feet, or a minimum of 30 gallons of water per acre for conventional application equipment (3 gallons of water per acre for low/ultralow volume equipment).

Pests controlled by Neemix® 4.5	Rate of Neemix® 4.5 per 100 gallons of water*	Remarks
Aphids	10 – 16 fl. oz.	Foliar application for suppression and adult feeding deterrence.
Armyworms	4 – 16 fl. oz.	Foliar application against larvae.
Borers , including Peach Twig Borer, Peachtree Borer, and Squash Vine Borer	4 – 16 fl. oz.	Foliar application against young larvae before boring or tunneling in the plant.
Caterpillars, Loopers , and other Lepidoptera Larvae (worms)	4 – 16 fl. oz. (Except as noted at right)	Foliar application against larvae feeding externally on leaves, fruits, other external plant parts. Corn Earworm, Diamondback Moth, Hickory Shuckworm, Imported Cabbageworm (larvae of Cabbage Butterfly), and Navel Orangeworm: Use 10 – 16 fl. oz. /100 gal. Artichoke Plume Moth: Apply at 16 fl. oz. /100 gal.
Colorado Potato Beetle & other leaf-feeding beetles	4 – 16 fl. oz.	Foliar application against leaf-feeding larvae.
Cutworms	5 – 16 fl. oz.	Foliar application against larvae feeding on leaves or stems.

(continued)

For Use on Vegetables, Melons, Strawberries, and Other Food Crops Grown in Greenhouses (or other cover) for Transplanting to Production Fields.

For Use on Bearing and Nonbearing Fruit and Nut Trees, Grapevines, Caneberries, and Other Small Fruits.
 Apply NEE MIX® 4.5 at the indicated rates in sufficient water to ensure adequate plant coverage. Use 1-2 gallons of spray solution per 1,000 square feet, or a minimum of 30 gallons of water per acre for conventional application equipment (3 gallons of water per acre for low/ultralow volume equipment). (continued)

Pests controlled by NEE MIX® 4.5	Rate of NEE MIX® 4.5 per 100 gallons of water*	Remarks
Leathoppers	10 – 16 fl. oz.	Foliar application against nymphs.
Leafminers: <i>Liriomyza</i> spp. and citrus leafminer (<i>Phyllocnistis citrella</i>)	6 – 16 fl. oz.	Foliar application against larvae. Mix with approved oil-based adjuvant for best results.
Leafrollers	4 – 16 fl. oz.	Foliar application against larvae.
Scales	6 – 16 fl. oz.	Foliar or stem application targeting crawler stages.
Whiteflies	6 – 16 fl. oz.	Foliar application against nymphs. Spray should be directed to undersides of leaves.

*When using lower rates (less than 10 fl. oz.), combine NEE MIX® 4.5 with an approved adjuvant such as a non-phytotoxic crop oil, up to 1% for improved spray coverage and transliner uptake. Always use sufficient spray volume to ensure good coverage of all plant parts. Treat early and target youngest larvae or nymphs for best control. Repeat applications every 7-10 days or as needed to maintain control.

DIRECTIONS FOR COMMERCIAL LAWNS AND TURF

Surface-Feeding Insects:

For use to control cutworms, armyworms, sod webworms, crickets, chinch bugs, leathoppers, and grasshoppers. Apply at first sign of pest presence or damage to turf. Do not apply if rain is forecast within the next 24 hours. Apply 1 quart – 3 gallons of NEE MIX® 4.5 per acre (or 0.75 – 9 fluid ounces per 1,000 square feet) using enough spray volume to obtain thorough coverage and penetration of the turf canopy. Use 2 – 5 gallons of diluted material per 1,000 square feet, or 50 – 100 gallons of diluted material per acre. The treated area may be lightly irrigated for 3 – 5 minutes after application if desired to increase penetration of the turf surface. However, do not water turf again for 2 days after application.

Reapply as needed to maintain control of turf damage. Be sure to treat under shrubs and plants bordering houses or other structures.

Subsurface-Feeding Insects:

Mow and irrigate turf prior to application. The treated area may be lightly irrigated for 3 – 5 minutes after application if desired to increase penetration of the turf surface. Do not water turf again within 24 hours after application. Do not mow again within 3 days after application.

For use to control white grubs (Japanese beetles, European chafers, dung beetles, green June beetles, May beetles, annual white grubs, grub beetles, southern masked chafers, etc.) and crane fly larvae (leatherjackets):

- For white grubs, make application soon after adults emerge in summer (1 – 3 weeks after first sign of adults). Leatherjackets should be targeted as young larvae while feeding near the soil surface.
- Apply 1 quart – 3 gallons of NEE MIX® 4.5 per acre (0.75 – 9 fluid ounces per 1,000 square feet) using enough spray volume to obtain thorough coverage and penetration of the turf. Use 50 – 100 gallons of diluted material per acre, or 2 – 5 gallons of diluted material per 1,000 square feet.

For use to control mole crickets:

- Apply 1 quart – 3 gallons of NEE MIX® 4.5 per acre (0.75 – 9 fluid ounces per 1,000 square feet) using enough spray volume to obtain thorough coverage. Use 2 – 5 gallons of diluted material per 1,000 square feet, or 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.

For use to control billbugs:

- Apply in mid to late spring or at first sign of pest emergence or damage.
- Apply 1 quart – 3 gallons of NEE MIX® 4.5 per acre (0.75 – 9 fluid ounces per 1,000 square feet) using enough spray volume to obtain thorough coverage. Use 50 – 100 gallons of diluted material per acre, or 2 – 5 gallons of diluted material per 1,000 square feet.
- Reapply as necessary. Repeat treatment in early to mid fall to control possible second generation.

Nematodes:

Apply 1 quart – 3 gallons of NEE MIX® 4.5 per acre (0.75 – 9 fluid ounces per 1,000 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 1,000 square feet. Repeat as necessary.

DIRECTIONS FOR MUSHROOMS

Compost Treatment (Post-Pasteurization): After the compost has cooled, but prior to broadcasting spawn, dilute 2 – 4 fl. oz. of NEE MIX® 4.5 with 25 gallons of water, mix thoroughly, and apply as a fine spray over the compost surface (25 gallons treats 1,000 square feet).

Post Planting (Spawning Treatment): Dilute 1 – 2 fl. oz. of NEE MIX® 4.5 with 25 gallons of water, mix thoroughly, and apply as a fine spray to the surface (25 gallons treats 1,000 square feet).

Casing Layer Treatment: Beginning 3 days after casing, dilute 0.5 – 1 fl. oz. of NEE MIX® 4.5 with 25 gallons of water, mix thoroughly, and apply as a fine spray to the surface (25 gallons treats 1,000 square feet). Repeat every 7 – 10 days.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store above 100°F or below -20°F for extended periods of time. Keep containers tightly closed when not in use.

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

CONTAINER HANDLING: Non-refillable 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.

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. To the extent consistent with applicable law, 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.**

INSECTS AND OTHER PESTS CONTROLLED BY NEE MIX® 4.5

Aphids , such as:	Cotton Aphid	Melon Aphid	Red Aphid
Apple Aphid	Filbert Aphid	Pea Aphid	Woolly Apple Aphid
Blackmargined Aphid	Green Peach Aphid	Potato Aphid	
Cabbage Aphid			
Beetle Larvae, Weevil Larvae, and Grubs , such as:	Bluegrass Weevil	Cucumber Beetles	May Beetle
Bark Beetles	Boll Weevil	Flea Beetles	Mexican Bean Beetle
Bean Leaf Beetle	Chafers (see <i>list below</i>)	Japanese Beetle	Pecan Weevil
Billbugs	Chestnut Weevil	Japanese Weevil	Potato Flea Beetle
Black Vine Weevil	Colorado Potato Beetle	June Beetles	Strawberry Beetles
Blisters Beetles			
Borers , such as:	Peachtree Borer	Southwestern Corn Borer	
Mint Root Borer	Peach Twig Borer	Squash vine borer	
European Corn Borer			
Bugs , such as: Chinch Bug, Lygus Bugs, Slink Bugs (all types), and Squash Bugs			
Cankerworms , such as: Elm Spanworm, Fall Cankerworm, Linden Looper, and Spring Cankerworm			
Armyworms, Bollworms, Budworms, Caterpillars, Fruitworms, Loopers, Webworms, and Other Worms (Lepidoptera larvae) , such as:	Diamondback Moth	Melon Worm	Southern Armyworm
Beet Armyworm	Fall Armyworm	Melon Rindworm	Soybean Looper
Bollworm	Grapefruit Worm	Moth Larvae (see <i>list below</i>)	Spruce Budworm
Borers (see <i>list above</i>)	Grape Leafroller	Navel Orangeworm	Tent Caterpillar
Cabbage Looper	Grapeleaf Skeletonizer	Pecan Nut Casebearer	Tobacco Budworm
Cabbage Butterfly	Hickory Shuckworm	Pink bollworm	Tobacco Hornworm
Cherry Fruitworm	Hornworms	Rindworm	Tomato Fruitworm
Corn Earworm	Imported Cabbageworm	Redworm	Tomato Hornworm
Cutworms (see <i>list below</i>)	Lawn Armyworm	Red-humped Caterpillar	Tomato Pinworm
Dagger Moth	Leafrollers (see <i>list below</i>)	Saltmarsh Caterpillar	Walnut Caterpillar
Chafers , such as: European Chafers, Northern Masked Chafers, Rose Chafers, and Southern Masked Chafers			
Crickets , such as: Mole Cricket and Mormon Cricket			
Cutworms , such as: Black Cutworm, Citrus Cutworm, Climbing Cutworm, Western Bean Cutworm, and Variegated Cutworm			
Grasshoppers and Locusts			
Leafhoppers and Leafliers			
Leafhoppers , such as: Aster Leafhopper, Grape Leafhopper, Potato Leafhopper, and Variegated Leafhopper			

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INSECTS AND OTHER PESTS CONTROLLED BY NEEIMIX® 4.5 (continued)

Leafminers , such as: Citrus Leafminer, Pea Leafminer, Serpentine Leafminer, and Vegetable Leafminer				
Leafrollers , such as:				
Blueberry Leafroller	Fruittree Leafroller	Obliquebanded Leafroller	Pandemis Leafroller	
Filbert Leafroller	Grape Leafroller	Omnivorous Leafroller		
Leaf perforators				
Maggots (Fly larvae) , such as:				
Cabbage Maggot	Fungus Gnat	Mushroom Fly	Phorid Flies	Walnut Husk Fly
Caribbean Fruit Fly	Hessian Fly	Melon Fly	Seed Corn Maggot	
Crane Fly	Leatherjackets	Onion Maggot	Scarid Flies	
Fruit flies	Mediterranean Fruit Fly	Oriental Fruit Fly	Shore Fly	
Marsh Flies, Crane Flies, and Leatherjackets				
Mealybugs				
Millipedes				
Moth larvae , such as:				
Artichoke Plume Moth	European Grapevine Moth	Oriental Fruit Moth	Sunflower Moth	Tufted Apple Bud Moth
Codling Moth	Gypsy Moth	Sunflower Bud Moth	Tiger Moth	Tussock Moth
Diamondback Moth	Light Brown Apple Moth			
Nematodes (suppression)				
Phylloxera , such as: Grape Phylloxera, Pecan Leaf Phylloxera, Pecan Stem Phylloxera				
Psyllids , such as: Asian Citrus Psyllid, Pear Psylla, Potato Psyllid, Tomato Psyllid				
Sawflies				
Scale insects , such as:				
Black Scale	Calico Scale	Frosted Scales	San Jose Scale	
Brown Soft Scale	Cottony-cushion Scale	Green Scale	Tea Scale	
California Red Scale	Florida Red Scale	Purple Scale	Wax Scale	
Sowbugs (Pillbugs)				
Spittlebugs				
Thrips , such as:				
Citrus Thrips	Melon Thrips	Pear Thrips	Western Flower Thrips	
Flower Thrips	Onion Thrips	<i>Thrips palmi</i>		
Webworms , such as: Fall Webworm, Garden Webworm, Lesser Webworm, and Sod Webworm				
Whiteflies , such as: Greenhouse whitefly, Silverleaf Whitefly, and Sweet Potato Whitefly				

CROPS ON WHICH NEE MIX® 4.5 CAN BE USED

Brassica (Cole) Crops, such as:

Bok Choy
 Broccoli
 Broccoli Raab
 Brussels Sprouts
 Cabbage
 Cauliflower
 Chinese Cabbage
 (Bok Choy, Gai
 Lon, Napa)

Cavalo Broccoli
 Collards
 Kale

Kohlrabi
 Mustard Greens
 Mizuna

Rapini
 Turnip Tops

Bulb Vegetables, such as: Garlic, Leek, Onion (all types), and Shallot

Citrus Fruits, such as:

Calamondin
 Citrus citron
 Grapefruit
 Kumquat

Mandarin (Tangerine)
 Orange (all types)

Pummelo
 Satsuma Mandarin

Cucurbit Vegetables and Melons, such as:

Balsam pear
 (Bitter Melon)
 Cantaloupe
 Casaba
 Chinese Waxgourd
 Citron Melon

Grenshaw
 Cucumber
 Gherkin

Gourds
 Honeyballs
 Honeydew

Mango Melon
 Muskmelon
 Pumpkin
 Squash (all types)
 Watermelon
 Zucchini

Feed and Forage Crops, such as: Alfalfa, Clover, Lespedeza, Trefoil, Vetch (all types), and any grass grown for hay, forage, or animal feed.

Fruiting Vegetables, such as:

Eggplant
 Ground Cherry
 Okra
 Peppino

Tomato

Peppers (all types)
 Tomatillo

Herbs and Spices, such as:

Allspice
 Angelica
 Anise
 Annatto
 Balm
 Basil
 Borage
 Burnet
 Camomile
 Capers
 Caraway
 Cardamom
 Cassia
 Catnip
 Celery Seed
 Chives
 Cilantro
 Cinnamon
 Cloves
 Coriander

Lemongrass
 Lovage
 Mace
 Marigold
 Marjoram
 Mint
 Mustard Seed
 Nasturtium
 Nutmeg
 Pennyroyal

Pepper
 (Black or White)
 Poppy Seed
 Rosemary
 Rue
 Saffron
 Sage
 Savory
 Spearmint
 Sweet Basil

Sweet Bay
 Tansy
 Tarragon
 Thyme
 Vanilla
 Wintergreen
 Woodruff
 Wormwood

Leafy Vegetables, such as:

Arugula
 Cardoon
 Celery
 Celluce
 Chervil
 Chinese Celery
 Chinese Spinach
 Corn Salad (Mâche)

Chrysanthemum
 (Edible)
 Cress (all types)
 Dandelion

Dock (Sorrel)
 Endive (Escarole)
 Fennel
 Lettuce (all types)

Orach
 Parsley
 Purslane
 Radicchio

Legumes, such as:

Alfalfa
 Beans (all types)
 Chickpea (Garbanzo)
 Cowpeas

Lupins (all types)
 Peas (all types)

Peanuts
 Soybean

(continued)

CROPS ON WHICH NEEIMIX® 4.5 CAN BE USED (continued)

Pome Fruits , such as:	Jujube Loquat	Mayhaw Pear*	Quince	
Apple				
Crabapple				
Root and Tuber Crops , such as:	Chervil Daiikon Carrot Cassava Celeriac	Ginseng Horseradish Japanese radish Jicama	Parsnip Potato Radish Rutabaga	Salsify Sugarbeet Sweet Potato Turmeric Turnip Yam Yam bean
Small Fruits and Berries , such as:	Blackberry (all types) Blueberry Boysenberry	Gooseberry Grapes (all types) Huckleberry	Loganberry Olives Ollalibeerry	Raspberry Strawberry Youngberry
Stone Fruits , such as:	Apricot Aprium	Peach Plum	Plumcot Pluot	Prune
Tree Nuts , such as:	Almond Beech Nut Brazil Nut	Chinquapin Filberts (Hazelnuts) Hickory Nuts	Macadamia Pecan Pistachio	Walnuts
Tropical and Subtropical Fruits , such as:	Abiu Avocado Breadfruit	Guava Longan Lychee	Malanga Mango Mangosteen	Papaya Passion Fruit Plantain Starfruit Sugar Apple
Turfgrass , such as:	Annual Bluegrass Annual Ryegrass	Centipede Grass Fescue	Perennial Ryegrass St. Augustine Grass	Seashore Paspalum Wheatgrass Zoysia Grass
Miscellaneous Crops , such as:	Artichoke Asparagus Birdseed Cacao Coffee	Corn (all types) Cotton Edible flowers Feijoa Figs	Palm Pawpaw Persimmon Pineapple Pomegranate	Sugarcane Tamarillo Tea Tobacco Waterchestnut Watercress

*Do not use on Comice Pears and other known sensitive pear varieties.

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 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, 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, where pesticide distribution is adversely affected.
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.

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.
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.

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.

Neemix[®] 4.5

INSECT GROWTH REGULATOR

BIOLOGICAL INSECTICIDE

An Insecticide for Use on Vegetables, Fruits, Turf (Including Commercial Lawns), and other Crops Grown in the Field or Mushroom Houses. Kills/repels a variety of insect pests including whiteflies, loopers, caterpillars, leafminers, psyllids, mealybugs, and larvae of diamondback moths.

CAN BE USED IN ORGANIC PRODUCTION

ACTIVE INGREDIENT:

Azadirachtin..... 4.5%

OTHER INGREDIENTS:

TOTAL:..... 95.5%

This product contains 0.39 lb. (175 g) of azadirachtin per US gallon

KEEP OUT OF REACH OF CHILDREN CAUTION

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

See attached booklet for additional Precautionary Statements, First Aid Statements, Directions for Use, and Storage and Disposal Statements.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Do not store above 100°F or below -20°F for extended periods of time. Keep containers tightly closed when not in use.

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

CONTAINER HANDLING: Non-refillable 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.



Net Contents: One Quart
or 32 fl. oz. (946mL)

Lot Number:

EPA Reg. No. 70051-9

EPA Est. No. 70051-CA-001

Item: 168600

Package: 568589

20191122

ESL 20160318

Manufactured for:

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

CERTIS

PEEL HERE TO OPEN 