



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

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

August 20, 2012

BioWorks, Inc.  
100 Rawson Road, Suite 205  
Victor, New York 14564  
Attn: Jamie Aggas

Subject: Notification - Minor product labeling changes per PR Notice 98-10.

Product Brand Name: **Molt-X**.  
EPA Reg. No: **68539-11**.  
Your Submission dated June 18, 2012.

Dear Jamie Aggas:

The Biopesticides and Pollution Prevention Division is in receipt of your application for Notification under Pesticide Registration Notice (PRN) 98-10 dated above. A screen of this request has been conducted for its applicability under PRN 98-10, and it has been determined that the action requested falls within the scope of this Notice. Our records have been duly noted, and the application, (EPA Form 8570-1) has been stamped "Notification Accepted" and will be placed accordingly in our records.

Three (3) copies of final printed labeling must be submitted to the Agency before your product as modified, may be sold or distributed [PR Notice 82-2 and 40 CFR 156.10(a) (6)].

If you have any questions regarding this action, you may contact Mr. Sylvester George at (703) 603-0688 or via e-mail at [george.sylvester@epa.gov](mailto:george.sylvester@epa.gov).

Sincerely,

*Linda A. Hollis*

Linda A. Hollis, Chief  
Biochemical Pesticide Branch  
Biopesticides and Pollution  
Prevention Division (7511P)



Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060



United States  
Environmental Protection Agency  
Washington, DC 20460

<input type="checkbox"/>	Registration
<input type="checkbox"/>	Amendment
<input checked="" type="checkbox"/>	Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number BioWorks, Inc./68539-11	2. EPA Product Manager Jeannine Kausch	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) BioWorks, Inc./Molt-X	PM# BPPD - Microbials	
5. Name and Address of Applicant (Include ZIP Code) BioWorks, Inc. 100 Rawson Road, Suite 205 Victor, NY 14564 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____ Date: 8/20/2012

Notification Accepted

Section - II

Reviewer: Sylvester George

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application.
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

As provided in 40 CFR 152.46(a), minor product labeling changes that the Agency has determined have no potential to cause unreasonable adverse effects to the environment. Changes are consistent with PR Notice 98-10.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If "Yes" Unit Packaging wgt. No. per container		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Package wgt. No. per container			
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4. Size(s) Retail Container 1 Pint, 1 Quart		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input checked="" type="checkbox"/> On Labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled				<input type="checkbox"/> Other _____	

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)		
Name Jamie Aggas	Title Regulatory Coordinator	Telephone No. (Include Area Code) 585-924-4362
2. Signature <i>Jamie Aggas</i>		6. Date Application Received (Stamped)
3. Title Regulatory Coordinator		
4. Typed Name Jamie Aggas		
5. Date Jun 18, 2012		

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.





BioWorks, Inc.  
100 Rawson Road, Suite 205  
Victor, NY 14564

www.bioworksinc.com

p 800 877 9443  
585 924 4362  
f 800 903 2377  
585 924 4412

3/12

June 18, 2012

Document Processing Desk  
Biopesticides & Pollution Prevention Division (BPPD)  
Office of Pesticide Programs (7504C)  
U. S. Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Avenue, N.W.  
Washington, DC 20460

Notification Accepted

Date: 8/20/2012  
Reviewer: Sylvester George

Attention: Jeannine Kausch

Subject: Labeling Changes

Re: MilStop (EPA Reg. No. 70870-1-68539) BFB

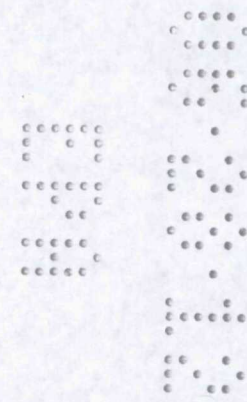
Molt-X (EPA Reg. No. 68539-11) BFB

PlantShield HC (EPA Reg. No. 68539-4) MPB

T-22 HC (EPA Reg. No. 68539-4) MPB

RootShield Granules (EPA Reg. No. 68539-3) MPB

RootShield Home and Garden (EPA Reg. No. 68539-4) MPB



Dear Ms. Kausch:

In an effort to remain compliant with EPA regulations, BioWorks, Inc. is submitting applications for labeling notifications for the above products. Enclosed are forms 8570-1 for each product. In addition, the proposed package labels for each product are included on the enclosed CD.

Please feel free to contact me if you have any questions or need further information.

Best regards,

*Jamie Aggas*

Jamie Aggas  
Regulatory Coordinator  
[jaggas@bioworksinc.com](mailto:jaggas@bioworksinc.com)  
585-924-4362 X342

PA ACCEPT  
Date  
PA  
RE



4/12

**Molt-X<sup>®</sup>**

Botanically Based  
Insecticide / Nematicide

**BioWorks**  
How You Grow Matters™  
BioWorks, Inc. 101 Rawson Rd., Suite 205, Victor, NY 14564  
800-877-9443

Net Contents: 1 Pint (0.473 liter)

**ACTIVE INGREDIENT:**  
Azadirachtin ..... 3.0%

**OTHER INGREDIENTS:** ..... 97.0%

**TOTAL:** ..... 100.00%

Contains 0.28 lb (128 grams) of azadirachtin per gallon  
EPA Reg. No. 68539-11  
EPA Est. No. 68539-NY-001

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

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





5/12

# Molt-X<sup>®</sup>

Botanically Based  
Insecticide / Nematicide

**ACTIVE INGREDIENT:**

Azadirachtin ..... 3.0%

**OTHER INGREDIENTS:** ..... 97.0%

**TOTAL:** ..... 100.00%

Contains 0.28 lb (128 grams) of azadirachtin per gallon

EPA Reg. No. 68539-11

EPA Est. No. 68539-NY-001

**KEEP OUT OF REACH  
OF CHILDREN  
CAUTION**

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



BioWorks, Inc. 100 Rawson Rd., Suite 205, Victor, NY 14564  
800-877-9443

Net Contents: 1 Quart (0.946 liter)

S-0208.1 040112





6/12

**Molt-X®**  
BOTANICALLY BASED  
INSECTICIDE / NEMATOCIDE

**FIRST AID**  
**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 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.

Have the product container or label with you when calling a poison control center or Doctor, or going for treatment. You may also contact 1-800-222-1222 for emergency medical treatment information.

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

**CAUTION:** Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash clothing before use.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Applicators and other handlers must wear:  
• Long-sleeved shirt and long pants  
• Waterproof gloves  
• Socks and shoes.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Wash hands before eating, drinking, chew-

ing gum, using tobacco or using the toilet. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish and aquatic invertebrates. Terrestrial uses: do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

**FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:**

Transportation: CHEMTREC 1-800-424-9300

**STORAGE AND DISPOSAL**

**GENERAL:** Do not contaminate water, food or feed by storage or disposal.

**STORAGE:** Store in cool, dry place. Do not store this product above 100 degrees F or below 20 degrees F for extended periods of time. Keep containers tightly closed and in original containers when not in use.

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

**CONTAINER DISPOSAL:** Non-Refillable Container. Triple rinse (or equivalent). Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

S-0433 040112



# Molt-X®

## BOTANICALLY BASED INSECTICIDE / NEMATOCIDE

For Agricultural and Commercial use, Greenhouse, Shadehouse, Interiorscape and Nursery use on outdoor food crops, indoor plants, turfgrass, outdoor shrubs, trees and ornamentals.

For controlling and repelling Insects such as aphids, armyworms, beetles, budworms, cutworms, fungus gnats, leafhoppers, leafminers, leafrollers, lepidopterous larvae, loopers, sawflies, thrips, webworms, and whiteflies; and plant parasitic nematodes such as dagger, golden, and root knot nematodes.

### ACTIVE INGREDIENT:

Azadirachtin.....	3.00%
<b>INERT INGREDIENTS:</b> .....	<b>97.00%</b>
<b>TOTAL:</b> .....	<b>100.00%</b>

Contains 0.28 lb (128 grams) of azadirachtin per gallon

KEEP OUT OF REACH OF CHILDREN

## CAUTION

BioWorks, Inc.  
100 Rawson Rd, Suite 205  
Victor, NY 14564 • 800-877-9443

EPA Reg. No: 68539-11  
EPA Est. No. 68539-NY-001

### FIRST AID

**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 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.

Have the product container or label with you when calling a poison control center or Doctor, or going for treatment. You may also contact 1-800-222-1222 for emergency medical treatment information.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash clothing before use.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Socks and shoes.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### USER SAFETY RECOMMENDATIONS

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Terrestrial uses: do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.  
FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:

Transportation: CHEMTREC 1-800-424-9300

#### 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 through any irrigation system unless the chemigation instructions on this label are followed. 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 and restricted entry interval. The requirements in this box only apply to uses of this product that are cov-

ered by the Worker Protection Standard (WPS).

Do not enter or allow entry into treated areas during the restricted entry interval (REI) of 4 hours.

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

- Long-sleeved shirt and long pants
- Water proof gloves
- Socks and shoes

#### NON-AGRICULTURAL USE REQUIREMENTS

These requirements apply to uses of this product that are NOT within the WPS 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. For other uses including golf courses and other non-agricultural uses, do not enter treated areas without protective clothing until sprays have dried.

#### PRODUCT DESCRIPTION

Molt-X is an emulsifiable concentrate containing 3.0% by weight azadirachtin. It has been evaluated on a wide variety of ornamental, forestry, and food crops. No phytotoxicity at directed field rates has been observed. Molt-X is an insect growth regulator and does not control adult insects. However, Molt-X is also effective as a repellent towards some adult species, as detailed below.

#### MODE OF ACTION

Molt-X controls insects in the larval, pupal, and nymphal stages by interfering with the metabolism of ecdysone. Insects typically die between larval to larval, larval to pupal, nymph to nymph molts, or during adult eclosion.

#### COMPATIBILITY

Molt-X has been found to be compatible with the most commonly used insecticides, fungicides and fertilizers. Check compatibility by using the correct proportion of the products in a small test container. Growers should then test the tank-mix combinations for possible adverse effects (such as settling out, flocculation, etc.) and for phytotoxic effects on a small sample of plants prior to use. As environmental conditions can alter the interactions between compounds, a compatibility test is recommend for both new and previously used combinations. Avoid mixtures of several materials and very concentrated spray mixtures.

Do not use Molt-X with Bordeaux mixture, triphenyltin hydroxide, lime sulfur, Rayplex iron or other highly alkaline materials. Use mildly alkaline mixtures immediately after mixing to prevent loss of insecticidal activity.

When using Molt-X in combination with other products, use Molt-X at the rate, or half the rate, specified in the Use Rate Recommendation table. Follow the directions for use, precautions and limitations for use on all of the product labels used in the combination. Some suggested tank mix combinations are as follows:

Molt-X plus non - phytotoxic crop oil*	Molt-X plus bifenthrin*
Molt-X plus endosulfan*	Molt-X plus esfenvalerate*
Molt-X plus chlorpyrifos*	Molt-X plus abamectin*
Molt-X plus acephate*	Molt-X plus diflubenzuron*
Molt-X plus Bacillus thuringiensis* (BT)	Molt-X plus pyrethrum + piperonyl butoxide (for fogging use)*

\* Always follow the manufacturer's Directions for Use and Precautionary Statements.

#### APPLICATION INSTRUCTIONS

##### READ ALL DIRECTIONS AND PRECAUTIONS BEFORE USE

Molt-X is exempt from tolerances and may be applied as directed to any food crop up to and including the day of harvest at a rate not exceeding 22.5 fl oz (20 grams active ingredient) per acre per application.

**MIXING:** Shake well before mixing. Always use this product promptly after mixing with water. Molt-X will break down in the spray solution if not used within 8 hours. Never allow tank mix to stand overnight. Molt-X will break down in spray tank mixtures that have pH values exceeding 7.0. The recommended pH range is between 5.5 and 6.5. For optimum performance, a buffering agent may be used. When mixing with other approved agrichemicals, always ensure proper agitation in the spray tank to ensure uniform application.

Using the use tables below, determine the amount of Molt-X required for the number of acres to be treated. To a clean spray tank add at least one half the water to be sprayed. Begin agitation and add the determined amount of Molt-X. Add the remaining water and continue agitation.

Molt-X disperses freely when added to water. Always use clean equipment. For uniform distribution on plant canopy and proper dilution, always ensure proper agitation in mixing tanks or vessels. When mixing with other agrichemicals, add solid constituents (such as wettable powders, water dispersible granules or micro-nutrients) last in the form of a slurry.

**APPLICATION METHOD AND EQUIPMENT:** Apply Molt-X as a foliar spray or a drench to soil or soil-less media (e.g., greenhouses) to control insects and nematodes. When needed, soil drenches can also be used to control soil-borne pests, including soil-borne larvae of foliar insect pests. When applying as a drench, avoid

7/12



excessive leaching. Molt-X can also be applied through sub-surface soil treatment equipment (e.g. turfgrass). To repel adults, apply through fogging equipment. Always follow equipment manufacturer's use directions.

Apply Molt-X using any powered or manual pesticide application equipment, which includes but is not restricted to: high-volume, low-volume, ultra-low volume, electrostatic, fogging, and chemigation. Follow the original manufacturer's recommendations when using these types of equipment.

**For optimum results, 2 to 3 applications made at 7 to 10 day intervals is recommended, unless otherwise specified.** Foliar applications should be made to both sides of leaves. In addition, a surfactant used as per the manufacturer's directions may improve product performance. The addition of a non-phytotoxic crop oil at rates not exceeding 1.0% (volume / volume) generally enhances insect control.

**Molt-X  
USE RATE RECOMMENDATIONS  
FOR KEY PESTS BY USE SITE**

Molt-X is intended for use on outdoor plants and food crops, plants grown indoors or in greenhouses, shadecloth, interiorscapes and nurseries. Use Molt-X to control any of the following insects and nematodes.

Use the tables below to determine the appropriate use rate for your site/pest combination. Rates are provided in ounces of Molt-X per area or row-length. When infestation is heavy, or when plant canopy is dense, Molt-X may be used at a rate up to twice (2X) that shown in the above table, not to exceed 22.5 oz E.C. / acre. When combining with other insecticides, use half the recommended rate of Molt-X.

**USE RATES FOR OUTDOOR PLANTS INCLUDING: FOOD CROPS, TREES, TURFGRASS, NURSERY, AND ALL OUTDOOR ORNAMENTAL PLANTS**

PEST	RATE ounces of Molt-X/acre	REMARKS
WHITEFLIES, such as: Greenhouse whiteflies, Silverleaf whiteflies, Woolly whiteflies	8	Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves.
LEAFMINERS, such as Azalea leafminers, Birch Leafminers, Citrus leafminers, Serpentine leafminers, Vegetable leafminers	10	Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves
SCALES, such as: Brown soft scales, California red scales, Coffee scales, Olive scales, San Jose scales	10	Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover twigs and leaves.
MEALY BUGS, such as: Citrus mealybugs	10	Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover twigs and leaves.
THRIPS, such as: Citrus thrips, Onion thrips, Thrips palmi	10	Spray when pests first appear. Repeat every 5 to 7 days.
APHIDS, such as: Cotton aphids, Green peach aphids, Pea aphids, Potato aphids	10	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.
PSYLLIDS, such as: Pear psylla	8	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.

PEST	RATE ounces of Molt-X/acre	REMARKS
LEAFHOPPERS, such as: Grape leafhoppers	10	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.
BUGS, such as: Boxelder bugs, Chinch bugs, Lygus bugs, Spittle bugs, Stink bugs	10	Spray nymphs early.
FLIES, such as: Blueberry maggots, Cherry maggots, Crane flies, Fruit flies, Midges, Onion maggots, Walnut husk flies	10	<u>For food crops:</u> Spray when pests first appear. <u>For non-food crops:</u> Drench soil to kill larvae
SAWFLIES, such as: European pine sawflies, Yellow headed pine sawflies	10	Treat larvae early.
CATERPILLARS, such as: Armyworms, Artichoke plume moths, Bagworms, Bollworms, Budworms, Cabbage butterflies, Cabbage Loopers, Cankerworms, Caseworms, Corn earworms, Cutworms, Diamond-backed moths, Fruitworms, Grapeleaf skeletonizers, Gypsy moths, Hickory shuckworms, Hornworms, Imported cabbage worms, Leafperforators, Leafrollers, Melonworms, Navel Orange-worms, Oblique banded leafrollers, Omnivorous leafrollers, Oriental fruit moths, Pickleworms, Pine tip moths, Pinworms, Red-banded leaf rollers, Sod webworms, Soybean loopers, Tent caterpillars, Tobacco budworms, Tussock moths	8	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.
BEETLES, such as: Bark Beetles, Blueberry flea beetles, Boll weevils, Colorado potato beetles, Flea beetles, Japanese beetles, Leaf beetles, Mexican bean beetles, Pepper weevils, Phylloxera, Rose Chafers, Twig girdler	8	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.
WEEVILS, such as: Black vine weevils, Strawberry vine weevils	10	Make foliar applications to deter adult feeding. Make at least 3 to 4 applications 10 days apart.



PEST	RATE ounces of Molt-X/acre	REMARKS
BORERS, such as: Peach twig borers, Peachtree borers, Dogwood borers, Cranberry borers	10	Spray soon after egg hatch. <u>For food crops:</u> Use in combination with 0.25% - 1.0% non- phytotoxic crop oil in sufficient water to cover undersides of leaves.
MOLE CRICKETS	10	Spray nymphs soon after egg hatch.
NEMATODES, such as: Burrowing nematodes, Dagger nematodes, Golden nematodes, Root knot nematodes	15	Apply in sufficient amount of water to penetrate in the soil to a depth of 12 inches. Repeat applications every 3 or 4 weeks or as needed.

\*When infestation is heavy, or when plant canopy is dense, Molt-X may be used at a rate up to twice (2X) that shown in the above table, not to exceed 22.5 oz/acre. When combining with other insecticides, half the rate of Molt-X is recommended.

**For Use Indoors or in Greenhouses**

Use the table below to determine the appropriate use rate for each pest. Foliar sprays for individual plants should thoroughly wet both sides of the leaves without causing runoff. Groups of potted plants should be sprayed at a rate of one gallon of finished spray for 500 square feet. When used as a drench apply 1 pint of finished spray for each gallon of soil in the pot.

USE RATES FOR ANY PLANT GROWN INDOORS OR IN GREENHOUSES, SHADECLOTH , INTERIORESCAPE AND NURSERIES		
PEST	RATE Ounces of Molt-X/100 gal. water	REMARKS
WHITEFLIES, such as: Greenhouse white-flies, Silverleaf white-flies	10	Ensure good coverage to top and bottom of leaves against larvae and pupae. Can be applied after bract formation on poinsettias (test for phytotoxicity prior to large scale use).
LEAFMINERS, such as: Serpentine leafminers	10	Spray early. Make 2 to 3 applications in rotation with adulticides such as pyrethroids
SOFT SCALES	10	Use in combination with 0.5 - 1.0% non-phytotoxic crop oil in sufficient water to cover twigs and leaves.
MEALY BUGS	8	Always use in combination with 0.5 - 1.0% non - phytotoxic crop oil
THRIPS, such as: Western flower thrips	8	Spray when pests first appear. Repeat every 5 to 7 days.
APHIDS, such as: Green peach aphids, Pea aphids, Cotton aphids, Rose aphids	8	Spray when pests first appear. Addition of 0.5 - 1.0% non-phytotoxic crop oil will enhance efficacy.
LACE BUGS, such as: Azalea lace bugs	8	Spray when pests first appear.
FLIES, such as: Crane flies, Fungus gnats, Shore flies	8	Add at least 1 pint of mixture per gallon pot as soil drench. Repeat application every 7 days for 3 weeks. For poinsettias, lilies and bedding plants, also make 1 application 10 to 15 days prior to shipping plants to prevent adult emergence.
CATERPILLARS such as: Armyworms, Bagworms, Cutworms, Leafrollers, Loopers, Spruce bud-worms, Webworms	8	Spray when pests first appear.

PEST	RATE Ounces of Molt-X/100 gal. water	REMARKS
BORERS, such as: Peachtree borers	10	Spray when pests first appear. Repeat as needed.
BETTERLES, such as: Bark beetles, Flea beetles, Japanese beetles	10	Spray when pests first appear. Repeat as needed.
WEEVILS, such as: Black vine weevils, strawberry vine weevils	8	Make foliar applications to deter adult feeding. Drench soil at a rate of 1 pint per gallon pot during spring and fall periods to control larvae. Make at least 3 to 4 applications 10 days apart.
NEMATODES, such as: Burrowing nematodes, Dagger nematodes, Golden nematodes, Root knot nematodes	8	Drench at least 1 pint of mixture per gallon pot once a week for 4 weeks. Avoid leaching - drench until moist to the touch. For heavy infestations, use twice the rate and drench more frequently.

**USE SITES**

**Molt-X CAN BE USED ON:**

**GREENHOUSE FOOD CROPS, such as:**

Brassica (cole) crops, cucurbits, eggplants, herbs and spices, legumes, peppers, tomatoes, and other miscellaneous crops grown in greenhouses.

**FOOD CROPS, including:**

**Root and tuber vegetables, such as:** Artichokes, beets, carrots, ginger, horseradish, potatoes, radishes, rutabagas, sweet potatoes, turmeric, turnips, yams.

**Leafy vegetables (including Brassica Leafy Vegetables), such as:** Amaranth, broccoli, Brussels sprouts, cabbage, cauliflower, celery, chervil, Chinese cabbage, collards, cress, endives, fennel, kale, kohlrabi, lettuce, mizuna, mustard greens, parsley, purslane, rape greens, rhubarb, spinach, Swiss chard.

**Legume vegetables, such as:** beans (field, kidney etc.), chickpeas, cowpeas, guar, jackbeans, lablab beans, lentils, peas, pigeon peas, soybeans, sword beans.

**Fruiting vegetables, such as:** Eggplants, ground cherries, pepinos, peppers, pimientos, tomatillos, tomatoes.

**Cucurbit vegetables, such as:** bitter melons, Chayotes, Chinese wax gourds, citron melons, cucumbers, gherkins, gourds, muskmelons (such as cantaloupes, casabas cranshaw etc.), pumpkins, squash, watermelons.

**Citrus fruits, such as:** Calamondins, citrus citrons, citrus hybrids, grapefruits, kumquats, lemons, limes, mandarins, oranges, pummellos, Satsuma mandarins.

**Pome fruits, such as:** Apples, crab apples, loquats, mayhaws, oriental pears, pears, quinces.

**Stone fruits, such as:** Apricots, cherries, nectarines, peaches, plums, prunes

**Berries, such as:** Blackberries and caneberries, blueberries, currants, elderberries, gooseberries, huckleberries, loganberries, raspberries, strawberries, youngberries.

**Cereal grains, such as:** Barley, buckwheat, corn, millet, oats, popcorn, rice, rye, sorghum, teosintes, triticale hybrids, wheat, wild rice.

**Herbs and spices, including but not limited to:** Allspice, angelica, anise, annatto, balm, basil, black and white peppers, borage, burnet, chamomile, caper buds, cardamom, caraway, cassia, catnip, celery seeds, chervil, chives, cinnamon, clary, cloves, coriander (cilantro), costmary, cumin, curry leaf, dills, fennels, fenugreek, grains of paradise, horehound, hyssop, juniper berry, lavender, lemongrass, lovage, mace, marigolds, marjoram, mustard seeds, nasturtium, nutmeg, parsley, pennyroyal, poppy seeds, rosemary, rue, saffron, sage, savory, sweet bay ( bay leaf), tansy, tarragon, thyme, vanilla, wintergreen, woodruff, wormwood.

**Bulb vegetables, such as:** Garlic, leeks, onions, shallots

**Nuts, such as:** Almonds, beechnuts, Brazil nuts, butternuts, cashews, chestnuts, chinquapin, filberts, hickory nuts, lychee nuts, macadamias, pecans, pistachios, walnuts.

**Oilseed crops, such as:** Canola, castor, crambe, guar, jojoba, peanuts, rape, safflower, sesame, soybean, sunflower.

**Tropical fruits, such as:** Atemoyas, bananas, breadfruits, cherimoyas, durians, guavas, malangas, mangos, papayas, passionfruits, starfruits.

**Miscellaneous food and non-food crops, such as:** Asparagus, avocados, birdseed, cacao, coffee, edible flowers, feijoa, figs, ginseng, grapes, guayule, hops, kiwis, okras, olives, palms, papayas, pawpaws, persimmons, pineapples, rambutans, sugarcane, tamarillos, tea, tobacco, waterchestnuts, watercress.



**ORNAMENTAL PLANTS, such as:** African violets, ageratum, aster, aucuba, begonia, cacti, calendula, calla, carnation, ceanothus, chrysanthemum, cineraria, coleus, cotoneaster, cyclamen, daffodil, dahlia, delphinium, ficus, foliage plants, fuchsia, gardenia, geranium, gloxinia, hyacinth, hydrangea, iris, ivy, lily, maiden-hair fern, marigold, narcissus, orchid, pansy, pelargonium, peony, phlox, pittosporum, poinsettia, pyracantha, rubber plant, snapdragon, stock, tulip, wandering jew, yew, yucca, zinnia.

**ORNAMENTAL TREES AND SHRUBS, such as:** Andromeda, arborvitae, ash, Austrian pine, azalea, beech, birch, birdsnest spruce, blue spruce, bougainvillea, boxwood, butternut, camellia, cedar, chamaecyparis, cherry, crabapple, Cyprus, dogwood, Douglas fir, elm, euonymus, firethorn, forsythia, hackberry, hawthorn, hemlock, hickory, holly, honeylocust, horse chestnut, ilex, juniper, larch, laurel, lilac, linden, London plane, magnolia, mandevilla, maple, mimosa, mountain ash, myrtle, oak, pachysandra, peach, pine, photinia, planetree, pines, poplar, privet, quince, rhododendron, roses, spruce, sycamore, white cedar, and white pine.

**TURF AND TURFGRASS, such as:** Bentgrass, Bermuda grass, bluegrass, centipede grass, fescue, ryegrass, St. Augustine, wheatgrass, zoysia grass.

**CHEMIGATION OF Molt-X**

**General Information**

This product may be applied only through drip (trickle) or sprinkler (center pivot, lateral move, end tow, side roll, traveler, big gun, solid set, or hand move), flood (basin) 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, you should contact State Extension Service Specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

Dilute Molt-X with water before introduction into the system; use the diluted mixture within 8 hours. Do not apply in irrigation water if the pH exceeds 7.0. The optimum pH for application is a range of 5.5 to 6.5. If needed, the pH of the irrigation water can be adjusted by use of a suitable buffering agent. Agitation is necessary. Apply at the rate recommended in the Directions for Use using sufficient water to achieve an even distribution within an 8 hour period. Do not apply Molt-X at a rate that exceeds 20 grams active ingredient per acre (22.5 fl oz of Molt-X). If applying Molt-X in combination with other products refer to the compatibility statement in the USE PRECAUTION section.

**OBSERVE THE FOLLOWING PRECAUTIONS IF YOUR CHEMIGATION SYSTEM IS CONNECTED TO A PUBLIC WATER SYSTEM**

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 a year.

Chemigation systems connected to a public water system 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 of overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in the cases where there is not a 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 speeds favor drift beyond the area intended for treatment.

**STATEMENTS CONCERNING THE OPERATION OF SPRINKLER CHEMIGATION; DRIP (TRICKLE); UTILIZING A PRESSURIZED WATER AND PESTICIDE INJECTION SYSTEM**

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 back flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system, interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch that will stop the

water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

**STATEMENTS CONCERNING THE OPERATION OF FLOOD (BASIN) IRRIGATION UTILIZING GRAVITY FLOW OR PRESSURIZED WATER AND PESTICIDE INJECTION SYSTEM.**

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 for water source contamination from back flow if water flow stops.

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

- a. The system must contain a functional interlocking check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow.
- b. The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of the 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 to the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- f. Systems must use a metering pump, such as a positive displacement injection pump, (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

**STORAGE AND DISPOSAL**

**GENERAL:** Do not contaminate water, food or feed by storage or disposal.

**STORAGE:** Store in cool, dry place. Do not store this product above 100 degrees F or below 20 degrees F for extended periods of time. Keep containers tightly closed and in original containers when not in use.

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

**CONTAINER DISPOSAL:** Non-Refillable Container. Triple rinse (or equivalent). Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**CONDITIONS OF SALE**

**NOTICE TO BUYER AND SELLER:** Seller warrants that this product conforms to the description on the label and is reasonably fit for the purposes stated on the label when used and stored in accordance with directions under normal conditions of use. This warranty does not extend to use of this product contrary to label directions or under conditions not reasonably foreseeable by the Seller, and Buyer and User assume the risk of any such use. Seller disclaims all other warranties express or implied, including any warranty of fitness or merchantability. To the extent permitted by state law, Seller shall not be liable for consequential, special or indirect damages resulting from use or handling of this product and Seller's sole liability and Buyer's and User's exclusive remedy shall be limited to refund of the purchase price. This product is sold only for uses stated on its label. No express or implied license is granted to use or sell this product under any patent in any country except as specified.



# Molt-X®

## BOTANICALLY BASED INSECTICIDE / NEMATOCIDE

For Agricultural and Commercial use, Greenhouse, Shadehouse, Interiorscape and Nursery use on outdoor food crops, indoor plants, turfgrass, outdoor shrubs, trees and ornamentals.

For controlling and repelling insects such as aphids, armyworms, beetles, budworms, cutworms, fungus gnats, leafhoppers, leafminers, leafrollers, lepidopteran larvae, loopers, sawflies, thrips, webworms, and whiteflies; and plant parasitic nematodes such as dagger, golden, and root knot nematodes.

### ACTIVE INGREDIENT:

Azadirachtin..... 3.00%

INERT INGREDIENTS:..... 97.00%

TOTAL:..... 100.00%

Contains 0.28 lb (128 grams) of azadirachtin per gallon

KEEP OUT OF REACH OF CHILDREN

## CAUTION

BioWorks, Inc.  
100 Rawson Rd, Suite 205  
Victor, NY 14564 • 800-877-9443

EPA Reg. No: 68539-11  
EPA Est. No. 68539-NY-001

### FIRST AID

**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 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.

Have the product container or label with you when calling a poison control center or Doctor, or going for treatment. You may also contact 1-800-222-1222 for emergency medical treatment information.

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash clothing before use.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Socks and shoes.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### USER SAFETY RECOMMENDATIONS

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Terrestrial uses: do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:

Transportation: CHEMTREC 1-800-424-9300

### 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 through any irrigation system unless the chemigation instructions on this label are followed. 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 and restricted entry interval. The requirements in this box only apply to uses of this product that are cov-

ered by the Worker Protection Standard (WPS).

Do not enter or allow entry into treated areas during the restricted entry interval (REI) of 4 hours.

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

- Long-sleeved shirt and long pants
- Water proof gloves
- Socks and shoes

### NON-AGRICULTURAL USE REQUIREMENTS

These requirements apply to uses of this product that are NOT within the WPS 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. For other uses including golf courses and other non-agricultural uses, do not enter treated areas without protective clothing until sprays have dried.

### PRODUCT DESCRIPTION

Molt-X is an emulsifiable concentrate containing 3.0% by weight azadirachtin. It has been evaluated on a wide variety of ornamental, forestry, and food crops. No phytotoxicity at directed field rates has been observed. Molt-X is an insect growth regulator and does not control adult insects. However, Molt-X is also effective as a repellent towards some adult species, as detailed below.

### MODE OF ACTION

Molt-X controls insects in the larval, pupal, and nymphal stages by interfering with the metabolism of ecdysone. Insects typically die between larval to larval, larval to pupal, nymph to nymph molts, or during adult eclosion.

### COMPATIBILITY

Molt-X has been found to be compatible with the most commonly used insecticides, fungicides and fertilizers. Check compatibility by using the correct proportion of the products in a small test container. Growers should then test the tank-mix combinations for possible adverse effects (such as settling out, flocculation, etc.) and for phytotoxic effects on a small sample of plants prior to use. As environmental conditions can alter the interactions between compounds, a compatibility test is recommended for both new and previously used combinations. Avoid mixtures of several materials and very concentrated spray mixtures.

Do not use Molt-X with Bordeaux mixture, triphenyltin hydroxide, lime sulfur, Rayplex iron or other highly alkaline materials. Use mildly alkaline mixtures immediately after mixing to prevent loss of insecticidal activity.

When using Molt-X in combination with other products, use Molt-X at the rate, or half the rate, specified in the Use Rate Recommendation table. Follow the directions for use, precautions and limitations for use on all of the product labels used in the combination. Some suggested tank mix combinations are as follows:

Molt-X plus non - phytotoxic crop oil*	Molt-X plus bifenthrin*
Molt-X plus endosulfan*	Molt-X plus esfenvalerate*
Molt-X plus chlorpyrifos*	Molt-X plus abamectin*
Molt-X plus acephate*	Molt-X plus diflubenzuron*
Molt-X plus Bacillus thuringiensis* (BT)	Molt-X plus pyrethrum + piperonyl butoxide (for fogging use)*

\* Always follow the manufacturer's Directions for Use and Precautionary Statements.

### APPLICATION INSTRUCTIONS

#### READ ALL DIRECTIONS AND PRECAUTIONS BEFORE USE

Molt-X is exempt from tolerances and may be applied as directed to any food crop up to and including the day of harvest at a rate not exceeding 22.5 fl oz (20 grams active ingredient) per acre per application.

**MIXING:** Shake well before mixing. Always use this product promptly after mixing with water. Molt-X will break down in the spray solution if not used within 8 hours. Never allow tank mix to stand overnight. Molt-X will break down in spray tank mixtures that have pH values exceeding 7.0. The recommended pH range is between 5.5 and 6.5. For optimum performance, a buffering agent may be used. When mixing with other approved agrichemicals, always ensure proper agitation in the spray tank to ensure uniform application.

Using the use tables below, determine the amount of Molt-X required for the number of acres to be treated. To a clean spray tank add at least one half the water to be sprayed. Begin agitation and add the determined amount of Molt-X. Add the remaining water and continue agitation.

Molt-X disperses freely when added to water. Always use clean equipment. For uniform distribution on plant canopy and proper dilution, always ensure proper agitation in mixing tanks or vessels. When mixing with other agrichemicals, add solid constituents (such as wettable powders, water dispersible granules or micro-nutrients) last in the form of a slurry.

**APPLICATION METHOD AND EQUIPMENT:** Apply Molt-X as a foliar spray or a drench to soil or soil-less media (e.g., greenhouses) to control insects and nematodes. When needed, soil drenches can also be used to control soil-borne pests, including soil-borne larvae of foliar insect pests. When applying as a drench, avoid

11/12



excessive leaching. Molt-X can also be applied through sub-surface soil treatment equipment (e.g. turfgrass). To repel adults, apply through fogging equipment. Always follow equipment manufacturer's use directions.

Apply Molt-X using any powered or manual pesticide application equipment, which includes but is not restricted to: high-volume, low-volume, ultra-low volume, electrostatic, fogging, and chemigation. Follow the original manufacturer's recommendations when using these types of equipment.

For optimum results, 2 to 3 applications made at 7 to 10 day intervals is recommended, unless otherwise specified. Foliar applications should be made to both sides of leaves. In addition, a surfactant used as per the manufacturer's directions may improve product performance. The addition of a non-phytotoxic crop oil at rates not exceeding 1.0% (volume / volume) generally enhances insect control.

**Molt-X  
USE RATE RECOMMENDATIONS  
FOR KEY PESTS BY USE SITE**

Molt-X is intended for use on outdoor plants and food crops, plants grown indoors or in greenhouses, shadecloth, interiorscapes and nurseries. Use Molt-X to control any of the following insects and nematodes.

Use the tables below to determine the appropriate use rate for your site/pest combination. Rates are provided in ounces of Molt-X per area or row-length. When infestation is heavy, or when plant canopy is dense, Molt-X may be used at a rate up to twice (2X) that shown in the above table, not to exceed 22.5 oz E.C. / acre. When combining with other insecticides, use half the recommended rate of Molt-X.

<b>USE RATES FOR OUTDOOR PLANTS INCLUDING: FOOD CROPS, TREES, TURFGRASS, NURSERY, AND ALL OUTDOOR ORNAMENTAL PLANTS</b>		
PEST	RATE ounces of Molt-X/acre	REMARKS
WHITEFLIES, such as: Greenhouse whiteflies, Silverleaf whiteflies, Woolly whiteflies	8	Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves.
LEAFMINERS, such as Azalea leafminers, Birch leafminers, Citrus leafminers, Serpentine leafminers, Vegetable leafminers	10	Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves
SCALES, such as: Brown soft scales, California red scales, Coffee scales, Olive scales, San Jose scales	10	Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover twigs and leaves.
MEALY BUGS, such as: Citrus mealybugs	10	Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover twigs and leaves.
THRIPS, such as: Citrus thrips, Onion thrips, Thrips palmi	10	Spray when pests first appear. Repeat every 5 to 7 days.
APHIDS, such as: Cotton aphids, Green peach aphids, Pea aphids, Potato aphids	10	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.
PSYLLIDS, such as: Pear psylla	8	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.

12/12

PEST	RATE ounces of Molt-X/acre	REMARKS
LEAFHOPPERS, such as: Grape leafhoppers	10	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.
BUGS, such as: Boxelder bugs, Chinch bugs, Lygus bugs, Spittle bugs, Stink bugs	10	Spray nymphs early.
FLIES, such as: Blueberry maggots, Cherry maggots, Crane flies, Fruit flies, Midges, Onion maggots, Walnut husk flies	10	<u>For food crops:</u> Spray when pests first appear. <u>For non-food crops:</u> Drench soil to kill larvae
SAWFLIES, such as: European pine sawflies, Yellow headed pine sawflies	10	Treat larvae early.
CATERPILLARS, such as: Armyworms, Artichoke plume moths, Bagworms, Bollworms, Budworms, Cabbage butterflies, Cabbage Loopers, Cankerworms, Caseworms, Corn earworms, Cutworms, Diamond-backed moths, Fruitworms, Grapeleaf skeletonizers, Gypsy moths, Hickory shuckworms, Hornworms, Imported cabbage worms, Leafperforators, Leafrollers, Melonworms, Navel Orange-worms, Oblique banded leafrollers, Omnivorous leafrollers, Oriental fruit moths, Pickleworms, Pine tip moths, Pinworms, Red-banded leaf rollers, Sod webworms, Soybean loopers, Tent caterpillars, Tobacco budworms, Tussock moths	8	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.
BETLES, such as: Bark Beetles, Blueberry flea beetles, Boll weevils, Colorado potato beetles, Flea beetles, Japanese beetles, Leaf beetles, Mexican bean beetles, Pepper weevils, Phylloxera, Rose Chafers, Twig girdler	8	Spray when pests first appear. <u>For food crops:</u> Repeat application after 7-10 days. Use in combination with 0.25 – 1.0% non-phytotoxic crop oil in sufficient water to cover undersides of leaves. <u>For non-food crops:</u> Repeat application every 5 to 7 days.
WEEVILS, such as: Black vine weevils, Strawberry vine weevils	10	Make foliar applications to deter adult feeding. Make at least 3 to 4 applications 10 days apart.