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Systems Integration Group, Inc.

APR | 5 1999

Ms. Christine Dively Director of Regulatory Affairs Thermo Trilogy Corporation 9145 Guilford Road, Suite 175 Columbia, MD 21046

Dear Ms. Dively,

Subject:

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Revised Master label containing sublabel text

Neem Oil 70% Fungicide/Insecticide/Miticide

EPA Reg. No. 70051-2

Your submission dated 4/1/99

Revised labeling referred to above, and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended (FIFRA), is acceptable subject to the comments listed below:

- 1. Before your next label printing, we strongly recommend that you re-format your dilution and application instructions for the agricultural section of your master label and your agricultural sub-label to an all table format. You must clearly state recommended amount of product, gallonage of water for both high and low volume applications for each crop grouping. We recommend that you use both percent solution and amount of product for the dilution directions. (Mixing of the terms is confusing).
- 2. Your dilution directions state that 0.5 gallons (for fungicide use on stone and tropical [fruit]) and 0.5 quart (for fungicide and miticide use on pome fruits and nuts and walnuts) of NEEM OIL 70% can be used per acre for low volume applications but your table for low volume application does not provide directions for anything other than 1 quart of NEEM OIL 70%. Before your next label printing, we recommend that you replace your text directions for dilutions/application for low volume sprays with a table to include all crops (including stone fruit, pome fruit, citrus, nuts and walnuts) with the appropriate gallons of water, amount of Neem Oil 70% and percent dilution. This is less complicated than using a footnote referring to crops that have only text use directions.

		CONCURRENCES	
SYMBOL 7511 C	75116		
SURNAME LOTON	a Bother		
DATE 4/12/5	9 1/13/99		
EPA Form 1320-1A /1/90	<u> </u>	Printed on Demoled Bases	OFFICIAL FILE COPY

EPA Form 1320-1A (1/90)

Printed on Recycled Paper

3. Per your 70051-5 label, you must add the following text prior to your next label printing:

"The maximum application rate is 20 grams of active ingredient or less per acre according to the tolerance exemption listed in 40 CFR 180.1119."

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

Sincerely yours,

Janet L. Andersen, Ph.D

Director

Biopesticides and Pollution

Prevention Division (7511C)

Page 1

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

Master Label March 1999

ACCEPTED ий comments In EPA Letter Dated

#### MASTER LABEL

APR 1 5 1999

This master label bears directions for agricultural, commercial and homeowner use with various application rates specific to the associated container size. Fundicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

## Neem Oil 70%

Broad Spectrum Fungicide/Insecticide/Miticide

For Indoor/Outdoor Use on Ornamental Flowering Plants, Trees, Shrubs, Foliage, Vegetables, Fruits, Nuts, and Row Crops Grown on Commercial Farms and Nurseries, Greenhouses, Landscapes

and Homes and Residential Landscapes

Controls Fungal Diseases Including Black Spot, Mildews, Rusts, and Scab Kills Mites and Insects Including Whiteflies, Aphids, and Scales

#### ACTIVE INGREDIENT:

Clarified Hydrophobic Extract of Neem Oil....70% INERT INGREDIENTS.....30% TOTAL 100%

This product contains 5.46 lb of clarified hydrophobic extract of neem oil per US gallon.

This container will treat up to 0.5 acres when used at the highest application rate (only for containers less than 5 gallons).

## KEEP OUT OF REACH OF CHILDREN **CAUTION**

EPA Reg. No. 70051-2

EPA Est. No. 69448-FL-01

Net Contents: 2.5 gallons, 100 gallons

Composition covered by US Patents 5,298,251; 5,356,629; 5,372,817; 5,405,612; and 5,409,708.

#### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if absorbed through the skin. Causes moderate eveirritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling.

STATEMENT OF PRACTICAL TREATEMENT IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF IN EYES: Flush eyes with plenty of water. Call physician if irritation persists.

#### Personal Protective Equipment:

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

Applicators and other handlers must wear:

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

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

#### User Safety Recommendations: Users should:

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

Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

## **ENVIRONMENTAL HAZARDS**

#### Agricultural/Commercial Use

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

#### Homeowner Use

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

This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treatment area.

PHYSICAL AND CHEMICAL HAZARDS 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 through any type of irrigation system.

#### STORAGE AND DISPOSAL

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

Pesticide Storage: Keep in original container. Store in a dry place away from direct sunlight, feed, or foodstuffs. Keep container tightly sealed when not in use. Do not store below 40° F (4°C).

#### Agricultural/Commercial Use

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of onsite or at an approved waste disposal facility.

#### Agricultural/Commercial Use

Container Disposal: Triple rinse. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### **Homeowner**

Pesticide and Container Disposal: Do not reuse empty container. Securely wrap original container in several layers of newspaper and discard in trash.

#### General Information:

- Kills eggs, larvae, and adult insects.
- Prevents and controls black spot on roses, anthracnose, rust and powdery mildew.
- Kills insects and their eggs.

Page 2

- Formulated for interiorscape use.
- Shake well before using.
- For best results, maintain constant agitation in spray equipment.
- For optimal performance, do not mix with cold water (less than 45°F).
- Neem Oil 70% is most effective when applied in early to mid-morning or late afternoon when adult pests, such as whiteflies are normally sedentary on the undersides of the foliage.
- Spray solutions should be used within several hours of preparation for maximum effectiveness. Do not store diluted solution for later use.
- Do not apply to wilted or otherwise stressed plants, or to newly transplanted materials prior to root establishment.
- Do not apply to known sensitive plant species, such as impatiens flowers, fuchsia flowers, hibiscus flowers, some rose flowers, ornamental ofive trees, or some carnation varieties without prior testing.
- When used in conjunction with beneficial insects, it is recommended that a small trial be conducted to assure compatibility before using on a large scale.
- As with other oil-based products, care should be exercised in timing applications to early morning/late evening to minimize the potential for leaf burn.
- Use with care on plants with tender tissue. Check for leaf burn in small scale trials prior to use.
- Thorough coverage is necessary to provide good disease and mite control. Neem Oil 70% prevents fungal attack of plant tissue and contact activity to mite pressure on the plant.
   Avoid excessive runoff of spray material for maximum control

#### Agricultural/Commercial Use

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

#### Homeowner Use

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

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

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

- Coverails.
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinylchloride (PVC) or Viton.
- Shoes plus socks.

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

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

#### TANK MIXING

Neem Oil 70% has been found to be compatible with most commonly used fungicides, insecticides, and fertilizers. Physical compatibility should first be checked with other products before mixing by using a jar test. Using a quart jar, add the proportionate amounts of the products to 1 quart of water. After thoroughly mixing, let mixture stand for at least 5 minutes. Growers should tank-mix combinations for phytotoxicity on a sample of plants prior to use. 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 Neem Oil 70% in a tank mix combination. Avoid tank mixes with Morestan, Vendex, Captan, Sulfur, Bravo/Echo or other chemically similar products as unpredictable results or leaf burn may occur.

## **COMMERCIAL USE**

• Do not use Triact 70 EC on food crops.

GREENHOUSE, LANDSCAPE, AND NURSERY USE INSTRUCTIONS FUNGICIDE USE

#### ORNAMENTAL DISEASE CONTROL

Neem Oil 70% is an effective fungicide for the prevention and control of various fungal diseases including black spot on roses, powdery mildew, downy mildew, anthracnose, rust, leaf spot, botrytis, needle rust, scab, flower, twig, and tip blight, and alternaria.

Landscape, Greenhouse, and Nursery Ornamentals: Neem Oil 70% will provide broad spectrum control of many fungal diseases affecting ornamental flowering plants, trees, shrubs, and foliage when used at the rate of 1 gallon per 100-200 gallons of water, depending on the level of disease pressure. The lower rate (1:200) can be used when spraying as a preventative in a greenhouse while the higher rate (1:100) is needed for outdoor applications. Determine the best rate for your particular situation.

#### Greenhouse

When Neem Oil 70% is used as a preventative, the lower rate (1:200) will provide adequate control for most greenhouse situations. If disease pressure is evident, the higher rate (1:100) is recommended. Applications for disease prevention should be made on a 7-14 day schedule depending on the anticipated severity of the disease pressure. To control existing disease, Neem Oil 70% should be applied on a 7-Day schedule until the disease pressure is eliminated. A 14-day schedule should then be used to prevent disease pressure from returning. NOTE: Greenhouse roses should only be sprayed in a rotation program, which includes Neem Oil 70% once every 4 weeks.

# Landscape Omamentals:

In outdoor landscape applications, apply Neem Oil 70% at rates of 1:50 - 1:200 rate (see tables for detailed use rates). This will

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Page 3

provide the necessary control under the extreme outdoor conditions. When using Neem Oil 70% as a preventative, application should be made on a 14-day schedule. If disease is present, a 7-day application schedule should be used to control the disease and prevent further damage from occurring.

#### MIXING INSTRUCTIONS:

Add Neem Oil 70% to one-half (1/2) full tank under agitation containing water of 45° F or greater before filling to desired level. If water temperature is below 45° F, premix Neem Oil 70% at a 1:1 ratio with tepid water to ensure good emulsification. Then dilute to final volume. When combining with other products, such as wettable powder insecticides or fungicides, add these items first when the tank is approximately 1/3 full. Ensure that there is good agitation while mixing for complete emulsification. Maintain agitation during spray application. Do not use if this oil does not emulsify.

#### APPLICATION INSTRUCTIONS:

Apply to runoff at 25-40 psi with hand sprayer or 100-200 psi with power sprayer as a fine spray to both leaf surfaces. Excessive application is unnecessary and should be avoided.

Manager	nent of Landscape	e and Omamental	Diseases
Spray Target	Concentration	Spray Interval	Precautions
Potted Plants	1:100-1:200	14 days	Trial first on
(Greenhouse)	(1.0%-0.5%)	<u> </u>	open blooms
Flowering	1:100-1:200	7-14 days	Trial first on
Bench Crops	(1.0%-0.5%)		open blooms-
(Greenhouse)			not suggested
	<u> </u>		for cut roses
Outdoor	1:100-1:200	7-14 days	Do not spray
Flowering	(1.0%-0.5%)		impatiens
Plants	<u> </u>	<u> </u>	flowers
Outdoor	1:50-1:100	14 days	
Woody Plants	(2.0%-1.0%)	<u></u>	

Management of Turf Diseases					
Spray Target	Concentration	Spray Interval	Precautions		
Snow Mold	1:100-1:50 (1.0%-2.0%)	14 days	In fall before first snow		
Dollar Spot	1:100-1:200 (1.0%-0.5%)	7-14 days	At first sign of disease		
Brown Patch	1:100-1:200 (1.0%-0.5%)	7-14 days	At first sign of disease		

## INSECTICIDE/MITICIDE USE:

For use to control whiteflies, mealybugs, aphids, leafhoppers, mites, and scales on ornamentals, trees, and shrubs in and around greenhouses, commercial nurseries, and other commercial structures.

Neem Oil 70% should be used at the rate of 1-2 gallons per 100 gallons of water. The low rate (1.0%) can be used when pest pressure is low. The high rate (2.0%) should be used for high pest infestations or to control more troublesome pests, such as mites and scales. Determine the best rate for your particular situation.

Sprays should be made on a 7-14 day interval depending on the severity of the pest problem. The 7-day schedule should be used until the pest population is reduced. A 14-day interval should then be used for control. Sprays should be made in early to midmorning or late afternoon. This is important to ensure that the spray thoroughly wets the pests to be controlled, which are often sedentary on the foliage at these times, and also minimizes plant stress.

#### AGRICULTURAL USE DIRECTIONS

- Do not use Trilogy in nurseries, on turf, or landscape plantings.
- Neem Oil 70% is a broad spectrum fungicide of certain diseases and controls mites in citrus, deciduous fruits and nuts, vegetable crops, cereal grains, and other miscellaneous crops.
- Do not apply this product through any type of irrigation system.
- Use care when applying near streams, ponds, lakes, or other bodies of water. Neem Oil 70% should not be applied when weather conditions favor drift or when the likelihood of runoff is high.
- Thorough plant coverage is essential to obtain optimal levels of control.
- For insects and mites: For best results, apply Neem Oil 70% thoroughly before adult insects, mites, or eggs are present in large numbers.
- For diseases: Apply Neem Oil 70% as a 1.0% solution in sufficient amounts of water to achieve complete coverage of foliage. (See the following detailed directions per crop groupings.) When used as a foliar fungicide, begin applications when conditions are favorable for disease but before infection. Neem Oil 70% may be applied every 7-14 days until threat of disease is over. Neem Oil 70% may be used in rotation with other fungicides to increase the spectrum of control.
- For mites: For best results, apply Neem Oil 70% in sufficient amounts of water to achieve complete coverage. Neem Oil 70% is most effective when applied before mites or eggs are present in large numbers. (See the following detailed directions per crop groupings). Apply at a rate of 1.0-2.0% Neem Oil 70%. Neem Oil 70% should be reapplied every 7-21 days until pressure is over.
- For insects: For best results, apply Neem Oil 70% at 1.0-2.0% in sufficient amounts of water to achieve complete coverage. Neem Oil 70% is most effective when applied before insects or eggs are present in large numbers. Repeat application based on pest pressure and field scouting for best results. Use the dilution tables to calculate dilution rates.
- Consult local agricultural extension service or experiment station for detailed information on timing of applications for the most effective control for your area.
- Neem Oil 70% may be applied by conventional, low volume, and aerial application equipment.

#### APPLICATION INSTRUCTIONS

Ground Application: Apply Neem Oil 70% by ground application in a minimum of 25 gallons of water/acre.

Aerial Application: For those crops where aerial applications are indicated, apply a minimum of 5 gallons of water/acre unless otherwise specified. Avoid application under conditions when uniform coverage cannot be obtained or when excessive drift may occur. Do not apply directly to humans, animals or aquatic animals.

#### MIXING INSTRUCTIONS:

Add Neem Oil 70% to one-half (1/2) full tank under agitation containing water of 45° F or greater before filling to desired level. If water temperature is below 45° F, premix Neem Oil 70% at a 1:1 ratio with tepid water to ensure good emulsification. Then dilute to final volume. When combining with other products, such as wettable powder insecticides or fungicides, add these items first when the tank is approximately 1/3 full. Ensure that there is good agitation while mixing for complete emulsification. Maintain agitation during spray application. Do not use if this oil does not emulsify.

Page 4

# DILUTION TABLE FOR LOW VOLUME (INCLUDING AERIAL) APPLICATIONS (5-30 gallons per acre)

Gallons of Water	Neem Oil 70%	Dilution
5	1 Quart*	5%
10	l Quart*	2.5%
15	l Quart*	1.67%
20	l Quart*	1.25%
25	l Quart*	1%
30	l Quart*	0.83%

<sup>\*</sup>For Citrus refer to specific application instructions.

# DILUTION TABLE FOR HIGH VOLUME APPLICATION (25-250 gallons per acre)

(23-230 ganons per acre)				
Gallons of	Gallons of	Gallons of	Gallons of	
Neem Oil	Neem Oil	Neem Oil	Neem Oil	
70% for	70% for	70% for	70% for	
0.5%	1.0%	1.5%	2.0%	
Solution	_Solution_	Solution	Solution	
0.125 (16	0.25 (32	0.375 (48	0.5 (64	
oz)_	oz)	oz)	oz)	
0.25 (32	0.5 (64	0.75 (96	1.0	
oz)	oz)	oz)		
0.375 (48	0.75 (96	1.125	1.5	
oz)	oz)			
0.5	1.0	1.5	2.0	
0.625 (80	1.25	1.875	2.5	
oz)	L `	l		
0.75	1.5	2.25	3.0	
0.875	1.75	2.625	3.5	
(112 oz)	Í	Ĺ	Í	
1.0	2.0	3.0	4.0	
1.125	2.25	3.375	_ 4.5	
1.25	2.5	3.75	5.0	
	Gallons of Neem Oil 70% for 0.5% Solution 0.125 (16 oz) 0.25 (32 oz) 0.375 (48 oz) 0.5 0.625 (80 oz) 0.75 (112 oz) 1.0 1.125	Gallons of Neem Oil         Gallons of Neem Oil           70% for 0.5%         1.0%           Solution         Solution           0.125 (16 oz)         0.25 (32 oz)           0.25 (32 oz)         0.5 (64 oz)           0.375 (48 oz)         0.75 (96 oz)           0.5         1.0           0.625 (80 oz)         1.25 oz)           0.75         1.5 0.875 (112 oz)           1.0         2.0 1.125           2.25	Gallons of Neem Oil         Gallons of Neem Oil         Gallons of Neem Oil           70% for 0.5%         1.0% for 1.0% for 1.5%         70% for 1.5%           Solution         Solution         Solution           0.125 (16 oz)         0.25 (32 oz)         0.375 (48 oz)           0.25 (32 oz)         0.5 (64 oz)         0.75 (96 oz)           0.375 (48 oz)         0.75 (96 oz)         1.125 oz)           0.5         1.0         1.5           0.625 (80 oz)         1.25 oz)         1.875 oz)           0.75         1.5         2.25 0.875 (112 oz)           1.0         2.0         3.0 1.125           1.125         2.25         3.375	

For dilutions less than 50 gallons, the recommended use is a minimum of 32 ounces of Neem Oil 70%.

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

Master Label March 1999 Page 5

#### CITRUS, POME (DECIDUOUS), STONE, TROPICAL FRUITS AND NUTS

#### Citrus

Use Neem Oil 70% on citrus to control diseases to include Anthracnose, Post-Bloom Fruit Drop, and Scabs. Apply as a foliar application at the rate of 1.0% in 25-200 gallons of water for high volume applications or a minimum of 0.5 gallons NEEM OIL 70% in a minimum of 5 gallons of water per acre for low volume applications. Do not apply more than 2.5 gallons of NEEM OIL 70% per acre, per application.

NEEM OIL 70% may be reapplied every 7-14 days until threat of disease is over.

For control of Alternaria and Greasy Spot, apply NEEM OIL 70% at a 1.0 % solution in 25-125 gallons of water per acre in combination with Copper @ 2.0 lbs. a.i. per acre (as found in EPA registered products such as Kocide® and Champ®) as a preventative disease spray tank mixture.

Use NEEM OIL 70% on citrus to control mites at a rate of 1.0-2.0% in 25-200 gallons of water for high volume application or 0.5 gallon NEEM OIL 70% in a minimum of 5 gallons of water per acre for low volume application. As a dormant oil spray, use NEEM OIL 70% as a 2.0% solution or 1 quart NEEM OIL 70% minimum per acre. Do not apply more than 5 gallons of NEEM OIL 70% per acre, per application.

#### Stone and Tropical

FUNGICIDE USE: Apply NEEM OIL 70% at a rate of 1.0% in 25-200 gallons of water for high volume applications or 0.5 gallons NEEM OIL 70% in a minimum of 5 gallons of water per acre for low volume application. NEEM OIL 70% may be reapplied every 7-14 days until threat of disease is over.

MITICIDE USE: Use NEEM OIL 70% at first sign of pests or pest damage at the appropriate rate listed below as a foliar spray in sufficient water for thorough coverage. Repeat applications as needed for adequate control every 7-21 days. Apply a 1.0-2.0% solution of NEEM OIL 70% for high volume application or a minimum of 1 quart NEEM OIL 70% in a minimum of 5 gallons of water per acre for low volume application. Do not apply more than 5 gallons of NEEM OIL 70% per acre, per application.

#### Pome (Deciduous Fruits) and Nuts

FUNGICIDE USE: Apply NEEM OIL 70% at a rate of 1.0% in 25-100 gallons of water per acre or 0.5 quarts NEEM OIL 70% in a minimum of 5 gallons of water per acre for low volume application. Apply no more than 2.5 gallons NEEM OIL 70% per acre in solution per application. Repeat applications every 7-14 days.

Walnuts: Avoid spraying after husk split.

MITICIDE USE: Use NEEM OIL 70% at a rate of 1.0-2.0% in 25-100 gallons of water per acre or 0.5 quarts NEEM OIL 70% in a minimum of 5 gallons of water per acre for low volume application. Apply no more than 2 gallons of NEEM OIL 70% per acre per solution. Apply at first sign of pests or pest damage. Repeat application as needed for adequate control every 7-21 days. Do not apply more than 5 gallons NEEM OIL 70% per acre, per application.

Walnuts: Avoid spraying after husk split

	CROPS			PESTS	DISEASES
Include	ng but not limit	ed to:			
Apples Apricots Avocados Bananas Catamondin Cherries Barbados cherries Sour cherries Sweet cherries Cherimoya Citrus citron Citrus hybrids Coconuts Crabapples Dates Feijoa Figs Grapefruits Guavas Jujubes Kiwifruit	Kumquats Lemons Limes Loquats Lychee Mangoes	Damson plums Japanese piums Pomegranates Prunes Pummelos Quinces Tangelos Tangerines	Aphids Apple grain aphids Black cherry aphids Green apple aphids Leafcurl aphids Mealy plum aphids Rosy apple aphids Woolly aphids Citrus blackflies Fruit flies Leafminers Citrus leafminers Mealybugs Mites Rusty mites	Spider mites Psylids Scales Calico scales Frosted scales Lecanium scales San Jose scales Whiteflies Citrus whiteflies Silverleaf whiteflies Sweetpotato whiteflies	Anthracnose Alternaria Post-bloom fruit drop Mildews Downy mildew Powdery mildew Scabs Greasy spot Shothole

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Page 6

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CROPS Including but not limited to:		]	PESTS	DISEASES	
Almonds Beach nuts Brazil nuts Butternuts Cashews Chestnuts	Chinquapins Filberts Hickory nuts Japanese horsechestnuts Macadamia nuts	Pecans Pistachios Walnuts	Aphids Woolly aphids Leafrollers Fruit tree Leafrollers Mites Rust mites Spider mites Scales Calico scales	Frosted scales Lecanium scales San Jose scales Weevils Chestnut weevils	Leaf spot Shothole

CUCURBITS

Refer to specific application instructions found directly below the heading Agricultural Use Directions

CROPS Including but not limited to:		PE	PESTS		
Balsam pears (bitter melons) Cantaloupes Casaba Chinese Waxgourds Citron melons Crenshaw Cucumbers Gherkins Gourds Honey balls	Melons (incl. hybrids) Honeydew melons Muskmelons Persian melons Pumpkins Squashes Watermelons (incl. hybrids) Zucchini	Aphids Leafeurl aphids Woolly aphids Leafminers Mites Spider mites Calico scales Frosted scales Lecanium scales San Jose scales	Scales Squash bugs Whiteflies Greenhouse whiteflies Silverleaf whiteflies Sweetpotato whiteflies	Mildews Downy mildew Powdery mildew	

BULB. COLE AND LEAFY VEGETABLES
Refer to specific application instructions found directly below the heading Agricultural Use Directions

CROPS Including but not limited to:			PESTS	DISEASES
			<del></del>	
Arrugula Broccofi Broccofi raab Chinese Broccofi (Gai Ion) Brussels sprouts Cabbage (head & Leaf) Chinese cabbage (Bok choy, Napa) Chinese mustard Cabbage (Gai Choy) Cauliflower Celery Celtuce Chervil	Chicory Red chicory Cilantro Collards Com salad Cress Watercress Dalkon Endive Fennel Garlic Greens Collard greens Mustard greens Rape greens Kale Kohlrabi	Lcek Lettuce (head & leaf) Low-bok Onions Orach Parsley Purslane Raddichio Rappini Rhubarb Shallots Spinach Chinese spinach (Amaranth, Tampala) Swiss chard Turnip tops	Aphids Woolly aphids Leafminers Mites Rust mites Spider mites Whiteflies Greenhouse whiteflies Silverleaf whiteflies Sweetpotato whiteflies	Alternaria Botrytis Mildews Downy mildew Powdery mildew Rusts White rust

# LEGUME AND FRUITING VEGETABLES

Refer to specific application instructions found directly below the heading Agricultural Use Directions

Inc	CROP.		Pi	ESTS	DISEASES
Beans Broad beans Calabaza Chickpeas Eggplants Ground cherries	Guar Lentils Peas Peanuts Pepinos Peppers	Pigeon peas Snow peas Soybeans Tomatillos Tomatoes	Aphids Woolly aphids Beetles Bean leaf beetles  Colorado Potato B Mexican bean beet Leafminers Mites Rust mites Spider mites Psyllids Whiteflies Greenhouse whitel Silverleaf whiteflie Sweetpotato white	lles flies es	Blights Leaf blight Mildews Powdery mildew Molds Gray mold Leaf spots Rusts

#### ROOTS AND TUBER VEGETABLES

Refer to specific application instructions found directly below the heading Agricultural Use Directions

CROPS Including but not limited to:		PESTS	DISEASES	
Artichokes Beets Cardone Carrots Cassava Ginger	Horseradish Parsnips Potatoes Sweet potatoes Radishes Rutabaga	Taro (Dasheen) Turmeric Turnips Yams Yam beans	Aphids Beetles Colorado potato beetles Mites Rust mites Spider mites Psyllids Scales Calico scales Frosted scales Lecanium scales San Jose scales Whiteflies Greenhouse whiteflies Silverleaf whiteflies Sweetpotato whiteflies	Blights Mildews Powdery mildew Rusts

Refer to specific	application instru		RUITS AND BERRIE below the heading Agri		s
CROPS Including but not limited to:		PESTS		DISEASES	
Blackberries Blueberries Boysenberries Cranberries Currants Dewberries Elderberries	Gooseberries Grapes Huckleberries Loganberries Olallie berries Raspberries(bladered)	Strawberries Youngberries	Aphids Woolly aphids Leafrollers Mites Rust mites Spider mites Scales	Calico scales Frosted scales Lecanium scales San Jose scales	Mildews Downy mildew Powdery mildew Rots Black rot

Page 8

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HE	RBS	AND	SPIC	ES

Refer to specific application instructions found directly below the heading Agricultural Use Directions

CROPS Including but not limited to:		PESTS		DISEASES	
Anise Balm Basil Borage Chamomile Caraway Catnip Celery Chives Coriander	Cumin Curry leaf Dandelion Dill Fennel Marigold Marjoram Mint Nasturtium Pennyroyal	Peppermint Rosemary Rue Sage Savory Spearmint Sweet bay Tarragon Thyme Wintergreen	Aphids Woolly aphids Mites Rust mites Spider mites Scales Calico scales	Frosted scales Lecanium scales San Jose scales	Mildews Powdery mildew Leaf spot

#### CEREAL GRAINS AND OTHER MISCELLANEOUS CROPS

<u>FUNGICIDE USE</u>: Apply NEEM OIL 70% at a rate of 1.0% in 25-100 gallons of water per acre or 2 pints NEEM OIL 70% in a minimum of 5 gallons of water per acre for low volume applications. Repeat applications every 7-14 days. Apply no more than 2 gallons NEEM OIL 70% per acre, per application. Larger plants will require higher amounts of water to obtain good coverage

MITICIDE USE: Apply NEEM OIL 70% at a rate of 1.0-2.0% in 25-100 gallons of water per acre or 2 pints NEEM OIL 70% in a minimum of 5 gallons of water per acre for low volume application. Apply no more than 2 gallons NEEM OIL 70% per acre in solution per application. Apply in a solution of sufficient volume to achieve complete coverage of foliage. NEEM OIL 70% may be reapplied every 7-21 days as needed for adequate control. Larger plants will require higher amounts of water to obtain good coverage.

CROPS Including but not limited to:			PESTS	DISEASES
Acerola Alfalfa Arracaga(Apio) Asparagus Barley Breadfruit Buckwheat Canola Coffee Coriander Com Popcom	Sweet com Cotton Hops Jicama Jojoba Kinep Mushrooms Oats Okra Quenepa Nispero Rice	Safflower Seagrapes Sesame Sorghum Soursup (Quanabanas) Sugarcane Star apples Sunflowers Tobacco Wheat	Beetles Asparagus Beetles Lygus bugs Thrips Whitetlies Greenhouse whiteflies Silverleaf whiteflies Sweetpotato whiteflies	Rusts

#### Warranty

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

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Page 9

# HOMEOWNER USE DIRECTIONS

#### GENERAL INFORMATION:

- Do not add adjuvants (spreaders, stickers, extenders, etc.) to Neem Oil 70%.
- Stops powdery mildew in 24-hours.

FUNGICIDE USE: For use on FRUITS, NUTS, VEGETABLES, HERBS, SPICES, ROSES, HOUSEPLANTS, FLOWERS, TREES, SHRUBS

#### APPLICATION INSTRUCTIONS:

Neem Oil 70% is an effective fungicide for the prevention and control of various fungal diseases including powdery mildew, black spot, downy mildew, anthracnose, rust, leaf spot, botrytis, needle rust, scab and flower, twig, tip blight, and alternaria. As a preventative, Neem Oil 70% should be applied on a 7 to 14 day schedule until the potential for disease development is no longer present. To control disease already present, apply Neem Oil 70% on a 7 day schedule until disease pressure is eliminated. Then continue spraying on a 14 day schedule to prevent the disease from reoccurring. To prevent rust leaf spot diseases, anthracnose and scab, begin applications at the first sign of spring budding. To prevent powdery mildew, apply in mid-summer or when disease is first detected. Applications should continue until disease pressure no longer exists.

#### MIXING INSTRUCTIONS:

Mix Neem Oil 70% at the rate of 2 tablespoons (1 ounce) per gallon of water. Thoroughly mix solution and spray all plant surfaces (including undersides of leaves) until completely wet. Frequently mix solution as you spray.

INSECTICIDE/MITICIDE USE: For use on FRUITS, NUTS, VEGETABLES, HERBS, SPICES, ROSES, HOUSEPLANTS, FLOWERS, TREES. SHRUBS

#### APPLICATION INSTRUCTIONS:

Apply Neem Oil 70% at first sign of insects/mites. For control of aphids, spider mites, scale, whiteflies, beetles, leafrollers, and other insect pests. Neem Oil 70% is most effective when applied every 7 to 14 days. For heavy insect populations, spray on a 7 day schedule.

#### MIXING INSTRUCTIONS:

Mix Neem Oil 70% at the rate of 2 tablespoons (1 ounce) per gallon of water. Thoroughly mix solution and spray all plant surfaces (including undersides of leaves) until completely wet. Frequently mix solution as you spray.

Net Contents: 1 Quart (0.946 liters)