

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

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

December 22, 2021

Olav Messerschmidt Registration Agent Terramera, Inc. c/o OMC Ag Consulting, Inc. 828 Tanglewood Lane East Lansing, MI 48823

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment –

Amendment to Add OMRI Logo and Marketing Claims

Product Name: TNC Biological Fungicide EPA Registration Number: 88760-11

Application Date: 06/15/2021

Action Case Code Number: 00306475

#### Dear Mr. Messerschmidt:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Page 2 of 2 EPA Reg. No. 88760-11 OPP Decision No. 00306475

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Chris Pfeifer of my team by phone at (703) 244-7991 or via email at pfeifer.chris@epa.gov.

Sincerely,

James Parker, Team Leader Biochemical Pesticides Branch Biopesticides and Pollution Prevention Division (7511P) Office of Pesticide Programs

Enclosure

Dec 22, 2021

{Note: Texts in [ ] are optional language. Texts in { } are notes for reviewers.}

## TNC Biological Fungicide (EPA Reg. No. 88760-11)

## **MASTER LABEL**

Sublabel A is for Agricultural Use

Sublabel B is for Commercial Greenhouse and Nurseries

Sublabel C is for Residential Use

# **TNC Biological Fungicide**

For control of foliar and soil fungal diseases.
For use on vegetables, fruits, tree crops, grapes, agronomic crops, greenhouses, ornamental plants, nurseries, and other listed plants

## **Active Ingredient:**

Cold Pressed Neem Oil	52.0%
Caprylic acid	25.0%
Other Ingredients	<u>23.0%</u>
Total	100.0%

# KEEP OUT OF REACH OF CHILDREN WARNING / AVISO

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

#### READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

**Shake Well Before Use** 

**NET CONTENTS: 8 FL. OZ. to 275 GALLONS** 

EPA File Symbol: 88760-11 EPA Est. No. 49292-WA-001 Batch No.

Manufactured for: Terramera, Inc. 6920 Salashan Pkwy E-100 Ferndale, WA 98248

Version 1.2

Dec 22, 2021

{Note: Texts in [ ] are optional language. Texts in { } are notes for reviewers.}

## [Optional Marketing Claims – Applicable to All Sublabels]

- [Use] The Power of Neem
- [Cold Pressed] Neem Oil
- Derived From Neem
- Cold-pressed from seeds of the Neem Tree
- [TNC Biological Fungicide] contains Cold-Pressed Neem Oil that [provides] [contains] [keeps] the full spectrum of limonoids
- [TNC Biological Fungicide] contains the full spectrum of bioactive[s] [compounds] of Neem [Oil]
- Plant-based [biopesticide] [spray] [active ingredient]
- [Botanical] [biological] fungicide
- Botanical based biopesticide
- Protect your plants from diseases
- Broad Spectrum fungicide
- Multiple Modes of Action
- [TNC Biological Fungicideis a] broad-spectrum biofungicide
- Prevents and controls listed [major] diseases
- · Prevents fungal attack of plant tissues
- Tool for prevention and control of powdery mildew and botrytis
- Controls powdery mildew, botrytis, [stem mildew,] [and] [&] [sour rot]
- Use for the prevention and control of powdery mildew, botrytis, stem mildew and others as listed on label.
- [For] Use as part of an Integrated Pest Management [program] [strategy]
- Complement for IPM programs
- Alternative within conventional programs
- For sustainable programs
- Peel Here for Directions & Precautions
- Concentrate
- Zero-day Pre-Harvest interval
- For indoor and outdoor use
- For use in hydroponic systems
- Keep plants healthy
- Made in the USA
- [A formulation of] [A combination of] two active ingredients for the management of Powdery Mildew and Botrytis [and other listed diseases]
- Two modes of action offering both contact and preventative properties
- Two active ingredients offering both contact and preventative properties
- [Two unique modes of action] [two active ingredients] for resistance management and broad-spectrum disease control.
- Dual Action Fungicide
- Two Actives [in One Jug] [in One Punch]
- [A] One-Two Punch Approach for Disease Management
- [A] One- Two Punch Approach for Disease Control
- Two in One Fungicide

- Two-fold approach
- Two-pronged approach
- Unique Mode of Action
- A plant derived active ingredients
- Resistance management tool
- Control of both Foliar and Soil Diseases
- Management of both Foliar and Soil Diseases
- Efficacious [broad-spectrum] fungicide
- Spore germination inhibitor
- Spore infection inhibitor
- Mycelial growth inhibitor
- Inhibits spore germination, infection, and mycelial growth.
- No MRLs
- Can be applied by chemigation
- Can be applied by as a soil drench
- Can be drip applied
- "NC" FRAC Code No known resistance

## TNC Biological Fungicide (EPA Reg. No. 88760-11) Sublabel A: Agricultural Use

# TNC Biological Fungicide

[ABN 1: Veneto]

For control of foliar and soil fungal diseases. For use on vegetables, fruits, tree crops, grapes, agronomic crops, greenhouses, ornamental plants, nurseries, and other listed plants.

## FOR ORGANIC PRODUCTION

[OMRI Logo] {For "Veneto" and "TNC Biological Fungicide}

**Active Ingredient:** 

Cold Pressed Neem Oil...... 52.0% Total

This product contains 4.03 lbs of cold pressed neem oil and 1.94 lbs of caprylic acid per gallon.]

## KEEP OUT OF REACH OF CHILDREN **WARNING / AVISO**

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

#### READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

#### Shake Well Before Use

[See back panel for first aid, precautionary statements, directions for use, storage and disposal statements, and warranty.]

[See included label leaflet for first aid, precautionary statements, directions for use, storage and disposal statements, and warranty.]

**NET CONTENTS: 8 FL. OZ. to 275 GALLONS** 

EPA File Symbol: 88760-11 Batch No. EPA Est. No. 49292-WA-001

> Manufactured For: Terramera, Inc. 6920 Salashan Pkwy E-100, Ferndale, WA 98248

#### **FIRST AID**

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies, call the poison control center at 1-800-222-1222. For general information on this product, call 1-800-363-8607 (Monday through Friday, 9 AM to 5 PM PST).

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

## Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions are available, wash with detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

#### **ENVIRONMENTAL HAZARDS**

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

#### **USER SAFETY RECOMMENDATIONS**

- 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. As soon as possible, wash thoroughly and change into clean clothing.

## **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS. 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 product application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

#### **AGRICULTURAL USE REQUIREMENTS**

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

Do not enter or allow entry into treated areas during the restricted entry interval (REI) of 24 hours.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Long-sleeved shirts and long pants
- Shoes plus socks
- Protective eyewear

#### NON-AGRICULTURAL USE REQUIREMENTS

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

## **GENERAL INFORMATION**

Read all directions before using this product.

**TNC Biological Fungicide** is an emulsifiable concentrate containing cold pressed neem oil and caprylic acid [(plant extracted fatty acid)] for the broad spectrum control of diseases listed in this label on vegetables, fruits, tree crops, grapes, agronomic crops, ornamental plants, greenhouses, and other plants listed below.

**TNC Biological Fungicide** is a contact fungicide that provides effective disease control when applied before or at the onset of the disease [both as a preventative and curative treatment].

The active ingredients of TNC Biological Fungicide, Cold Pressed Neem Oil and Caprylic Acid are exempt from the requirement of a tolerance.

- Thorough coverage is key to providing good disease control.
- For best results maintain constant agitation in spray tank and apply immediately.
- For optimal performance do not mix with cold water (less than 45°F).
- Application in early morning/late evening is recommended to minimize the potential for leaf burn.
- Do not apply under high humidity and temperature conditions >90°F.
- Do not apply to wilted or stressed plants and newly germinated or transplanted crops prior to root establishment.
- Use with care on plants with tender tissue. Test on a small area prior to broader use.
- Do not apply to sensitive plant species such as poinsettias, impatiens, hibiscus flowers, certain carnation and rose flower species, ornamental olive trees and comice pear.
- Weather conditions, intensity, type and physical stages of the pests, and treated crop can influence the degree of product efficacy.

## **APPLICATION RATES**

### Foliar Application:

- Use a concentration of 0.2 0.8% v/v.
  - For Tree Crops, the maximum rate per acre is 256 fl oz based on 250 gallons of spray solution. Higher spray volumes may be used but do not exceed the maximum rate per acre. When using less than 250 gallons of spray solution, refer to dilution table for appropriate rate based on volume.
  - For Strawberries, the maximum rate per acre is 154 fl oz based on 150 gallons of spray solution. Higher spray volumes may be used but do not exceed the

- maximum rate per acre. When using less than 150 gallons of spray solution, refer to dilution table for appropriate rate based on volume.
- For Grapes, the maximum rate per acre is 154 fl oz based on 150 gallons of spray solution. Higher spray volumes maybe used but do not exceed the maximum rate per acre. When using less than 150 gallons of spray solution, refer to dilution table for appropriate rate based on volume.
- For all other crops the maximum rate per acre is 102 fl oz based on 100 gallons of spray solution. Higher spray volumes maybe used but do not exceed the maximum rate per acre. When using less than 100 gallons of spray solution refer to dilution table for appropriate rate based on volume.

#### **Soil Applications**:

 Use a concentration of 0.2 – 0.8% v/v. Do not exceed a maximum rate of 256 fl oz per acre.

#### MIXING INSTRUCTIONS

## **TNC Biological Fungicide Alone:**

- TNC Biological Fungicide is an emulsifiable concentrate and requires only water for the appropriate use dilution. Additional surfactant is not required.
- Shake the container well before use.
- Add TNC Biological Fungicide to a clean spray tank half-filled with water and agitate.
- Next, add additional water to final spray volume, while maintaining continuous agitation.
- For optimal performance the finished spray solution should be between pH 5.5 and 7.0.
- Best results are achieved by using a spray water with a temperature of 45°F or warmer.
- If water temperature is below 45°F, achieve a good emulsion by premixing **TNC Biological Fungicide** at 1:1 ratio with tepid water, add to half-filled spray tank, agitate, then fill to final spray volume.
- Agitate continuously during mixing and application to prevent separation of the emulsion. Inadequate agitation can cause a non-uniform dilution resulting in crop injury and/or reduced efficacy.
- Always use the spray solution promptly after mixing and do not allow mixture to sit for extended periods of time. If allowed to sit, agitate thoroughly before resuming application.

**TNC Biological Fungicide** may solidify at temperatures below 50°F. If solidified, thaw the product by setting out in temperatures over 80°F and agitating well before mixing with water.

## **Mixing Order for Tank Mixes:**

- Fill clean spray tank with water to 1/3 of the required spray volume.
- Start agitation.
- Add different formulation types in the following order: 1) water dispersible granules, 2) wettable powders.

- Maintain agitation and add water to <sup>3</sup>/<sub>4</sub> of final spray volume.
- Next add **TNC Biological Fungicide**, other emulsifiable concentrates, water-based solutions, adjuvants, surfacts, oils and/or fertilizers.
- Agitate to achieve complete emulsification. Do not use if a uniform, cloudy emulsion is not formed.
- Continue adding water and agitating to desired final spray volume.
- Always use the spray solution promptly after mixing with water.
- Do not let tank mixture sit for an extended period of time. If tank mixture is allowed to sit, agitate thoroughly again prior to and during application. Sparger line agitators are preferred.
- Tank-mix combinations can alter the pH of the finished spray solution. Adjusting the spray mixture pH to a range between 5.5 and 7.0 will provide optimal performance.
- DO NOT tank mix with sulfur or sulfur containing products.

#### TANK MIX COMPATIBILITY:

To determine the physical compatibility of **TNC Biological Fungicide** with other products, test as described below before mixing.

Jar Compatibility Test: Using a quart jar, add the proportionate amounts of products to be tank mixed to 1 quart of water in the following order. Add wettable powders and water-dispersible granular products first, then add liquid flowables, then add emulsifiable concentrates and solutions last. After thoroughly mixing by agitation, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank. All possible tank mixes on all crops have not been tested. Growers must test tank mix combinations for phytotoxicity on a sample of plants prior to use. Do not use mixtures of incompatible products as it may cause phytotoxicity or result in lowered effectiveness.

Always read and follow the directions for use, precautions and limitations for use on all product labels used in combination. Applications must follow the precautions and limitations of the most restrictive product label in the mixture. Do not exceed the dosage rates of any product. Check compatibility by using the correct proportion of the products in a small test container.

DO NOT tank mix with sulfur or sulfur containing products.

## <u>APPLICATION DIRECTIONS</u>

Apply **TNC Biological Fungicide** as a foliar spray or as soil treatment (soil drench, infurrow, drip-applied) using thoroughly clean equipment. Applications can be made with any powered or manual pesticide application equipment including high volume, low volume, ultra-low volume, electrostatic, air blast, and fogging equipment. When applied as a foliar application, ensure complete coverage of the plant surfaces, but avoid pooling or run off. Follow the original equipment manufacturer's instructions.

## **FUNGICIDE FOLIAR USE**

To control listed diseases, apply **TNC Biological Fungicide** in sufficient amount of water and with adequate spray pressure to achieve thorough coverage of plant surfaces. **TNC Biological Fungicide** is most effective when applied before the onset of disease development. Apply **TNC Biological Fungicide** per acre at a concentration of 0.2 – 0.8% v/v. Spray early in the morning or in the evening for best results. Repeat application if it rains within four hours of spraying. Avoid spraying under conditions of high humidity and high temperature (>90°F). Do not tank mix with any sulfur or sulfur containing products.

Crop	Pest	Concentration	Spray Interval
All crops except Grapes	See DISEASES Section	0.2 - 0.8%	7-14 days
Grapes	Powdery Mildew, Stem Mildew, Sour Rot	0.2 - 0.8%	7-14 days from pre-bloom through veraison
	Botrytis		Spray at bloom, pre-bunch closure, veraison and 14 days after veraison

#### **FUNGICIDE SOIL TREATMENT**

To control listed soil-borne disease, apply as a soil application (soil drench, in-furrow, dripapplied) at 0.2 - 0.8 % (v/v) in sufficient amount of water to deliver complete and thorough coverage. When applied as a soil drench, avoid excess run off. For best results repeat the applications as necessary.

#### CHEMIGATION INSTRUCTIONS

#### **GENERAL CHEMIGATION REQUIREMENTS**

Apply this product only through in-furrow or drip (trickle) irrigation & system(s). 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.

When a supply tank is used, frequent agitation is necessary. Apply in the second half of the water application to deliver **TNC Biological Fungicide** to the soil pests.

#### FURROW CHEMIGATION REQUIREMENTS

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:

- 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 which 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.

#### DRIP CHEMIGATION REQUIREMENTS

- 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 inter-locking 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 which 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.

Dilution Table for Foliar Applications for Strawberries, Tree Crops and Grapes	es
(100 to 250 gallons per acre)	

Gallons of Water	0.2% v/v	0.4%v/v	0.6% v/v	0.8% v/v
100	26 fl oz	51 fl oz	77 fl oz	102 fl oz
125	32 fl oz	64 fl oz	96 fl oz	128 fl oz
150	38 fl oz	77 fl oz	115 fl oz	154 fl oz
175	45 fl oz	89 fl oz	134 fl oz	179 fl oz
200	51 fl oz	102 fl oz	154 fl oz	205 fl oz
225	58 fl oz	115 fl oz	173 fl oz	230 fl oz
250	64 fl oz	128 fl oz	192 fl oz	256 fl oz

# Dilution Table for Foliar Applications for All Other Crops (20 to 100 gallons per acre)

Gallons of Water	0.2% v/v	0.4%v/v	0.6% v/v	0.8% v/v
20	5 fl oz	10 fl oz	15 fl oz	20 fl oz
25	6 fl oz	13 fl oz	20 fl oz	26 fl oz
50	13 fl oz	26 fl oz	38 fl oz	51 fl oz
75	20 fl oz	38 fl oz	58 fl oz	77 fl oz
100	26 fl 0z	51 fl oz	77 fl oz	102 fl oz

**PHYTOTOXICITY:** To avoid plant damage, test for crop response by applying the spray solution on a small portion of the area to be treated before applying to the entire area. Make foliar applications in conditions that favor fast drying. Avoid applications during hot temperature conditions >90°F. Make applications early morning/late afternoon to avoid leaf burn. Not all possible mixtures of pesticide sprays, fertilizers, surfactants, and adjuvants have been tested. Therefore, it is the responsibility of the user to test spray mixtures to small areas to ensure crop safety before treating the entire area.

#### **USE SITES**

The active ingredients of TNC Biological Fungicide, Cold Pressed Neem Oil and Caprylic Acid are exempt from the requirement of a tolerance.

[Crop Group 3 -] Bul	b Vegetable Crops such as
Carlia	Onion

Garlic Onion
Leek Shallot

[Crop Group 9 -] Cucurbit Crops such as:

Cantaloupe Honeydew Melon Squash, Summer Crenshaw Melon Persian Melon Squash, Winter Cucumber Pumpkin Watermelon

[Crop Group 8 -] Fruiting Vegetable Crops such as:

Eggplant Tomatillo
Pepper Tomato

[Crop Group 4 & 5 -] Leafy & Brassica (Cole) Vegetable Crops such as

Cilantro Mustard green Arugula Collard Broccoli Parsley Brussel sprout Endive Radicchio Rhubarb Cabbage Greens Celery Kale Spinach Chinese cabbage Kohlrabi Swiss chard

Cauliflower Lettuce

[Crop Group 6 -] Legume Crops such as:

Bean Lentil
Chickpea Pea
Guar Soybean

[Crop Group 1 -] Root & Tuber Vegetable Crops such as:

Articoke Horseradish Radish

Beet Parsnip Sweet Potato

Carrot Potato Yam

[Crop Group 13 -] Small Fruit & Berry Crops such as:

Blackberry Kiwifruit
Blueberry Raspberry
Cranberry Strawberry

Grape

[Crop Group 10, 23 & 24 -] Citrus & Tropical Fruit Crops such as:

Avocado Grapefruit

BananaGuavaOliveCitrusLemonOrangeDateLimePapayaFigMandarinPineapple

Mango Pomegranate

[Crop Group 11 & 12 -] Pome & Stone Fruit Crops such as:

Apple Nectarine Peach
Apricot Pear Prune

Cherry Plum

[Crop Group 14 -] Tree Nuts such as:

Almond Filbert Pecan
Cashew Hickory Nut Pistachio

Chestnut Macadamia Nut

Coconut

[Crop Group 19 -] Herbs & Spices such as:

Basil Dill Poppy
Chamomile Fennel Rosemary
Chive Mint Sage
Cinnamon Mustard Tarragon
Clove buds Nutmeg Wintergreen

Cumin Pepper
Curry leaf Peppermint

[Crop Group 15 -] Ceral Grain Crops such as:

Barley Oats Triticale
Corn Rye Wheat
Millet Sorghum (Milo) Wild Rice

[Crop Group 18 -] Forage Crops such as:

Alfalfa Sainfoin
Clover Trefoil
Lupin Vetch

[Crop Group 20 -] Oilseed Crops such as:

Canola Cotton Sesame

Safflower Sunflower

Miscellaneous crops: peanut, hops, coffee, mushroom, okra, tobacco

Other Use Sites such as:

Ornamentals Greenhouses Sod Farms

Fencerows Nurseries Turf

Mushroom Houses Shade Houses

## **DISEASES**

## Use the following rate ranges and spray intervals to control the diseases listed below.

Crop	Pest	Concentration	Spray Interval
All crops except Grapes	See below	0.2 - 0.8%	7-14 days
	Powdery Mildew, Stem Mildew, Sour Rot		7-14 days from pre- bloom through veraison
Grapes		0.2 - 0.8%	Spray at bloom, pre- bunch closure, veraison and 14 days after veraison

Foliar Fungal Diseases		
Alternaria	Fire Blight	Scab
Anthracnose	Mummy Berry	Stem Mildew
Blight (early, late, leaf)	Molds	Southern Blight
Botrytis	Powdery Midlew	Sour Rot Grapes
Brown Rot	Rust	Walnut Blight
Downey Mildew		
Soil Fungal Diseases		
Fusarium Oxyporum	Macrophomina	Rhizoctonia Solani
Pythium Phytophthore	Verticillium	
Phytophthora		

## STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by pesticide storage or disposal.

**PESTICIDE STORAGE:** Do not store this product above 104°F or below 20°F for extended periods of time. Keep containers tightly closed and in original containers when not in use. Do not store exposed to ultraviolet light (sunlight) or moisture. Neem oil clouds and solidifies at temperatures below 59°F. If oil has solidified, gently thaw by exposing to temperatures over 80°F. Store in such a manner to prevent cross contamination with other pesticides, fertilizers,

food and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep container closed when not in use.

**PESTICIDAL DISPOSAL:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

#### **CONTAINER HANDLING:**

{For 5-Gallon or Smaller Containers} Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or dispose of in trash or in a sanitary landfill or by incineration.

{For Containers Larger than 5 Gallons} Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ½ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or dispose of in trash or in a sanitary landfill or by incineration.

{For 250 or 275-gallon Refillable Containers} Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### IMPORTANT: READ BEFORE USE

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS**: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Seller. All such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Terramera, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a purpose or otherwise, that extend beyond the statements made on this label. No agent of Terramera, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Terramera, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Terramera, Inc.'s election, the replacement of product.

[Terramera is a registered trademark of Terramera, Inc.]

[Optional Marketing Claims For Sublabel A]

• [Can be used] for organic production

Version 1.2

Dec 22, 2021

# TNC Biological Fungicide (EPA Reg. No. 88760-11) Sublabel B: Commercial Greenhouse and Nurseries

# **TNC Biological Fungicide**

For control of foliar and soil fungal diseases.
For use on vegetables, fruits, tree crops, grapes, agronomic crops, greenhouses, ornamental plants, nurseries, and other listed plants



#### **Active Ingredient:**

Cold Pressed Neem Oil	52.0%
Caprylic acid	25.0%
Other Ingredients	23.0%
	00.0%

[This product contains 4.03 lbs of cold pressed neem oil and 1.94 lbs of caprylic acid per gallon.]

# WARNING / AVISO

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

#### READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

#### Shake Well Before Use

[See back panel for first aid, precautionary statements, directions for use, storage and disposal statements, and warranty.]

[See included label leaflet for first aid, precautionary statements, directions for use, storage and disposal statements, and warranty.]

**NET CONTENTS: 8 FL. OZ. to 275 GALLONS** 

EPA File Symbol: 88760-11 EPA Est. No. 49292-WA-001 Batch No.

Manufactured For: Terramera, Inc. 6920 Salashan Pkwy E-100 Ferndale, WA 98248

#### **FIRST AID**

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies, call the poison control center at 1-800-222-1222. For general information on this product, call 1-800-363-8607 (Monday through Friday, 9 AM to 5 PM PST).

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

## Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions are available, wash with detergent and hot water. Keep and wash PPE separately from other laundry.

Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions are available, wash with detergent and hot water. Keep and wash PPE separately from other laundry.

### **ENVIRONMENTAL HAZARDS**

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwater or rinsate.

#### **USER SAFETY RECOMMENDATIONS**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

## **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

**READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS**. 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 product application. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

#### **AGRICULTURAL USE REQUIREMENTS**

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

Do not enter or allow entry into treated areas during the restricted entry interval (REI) of 24 hours.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear

## NON-AGRICULTURAL USE REQUIREMENTS

These 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. For other uses, including golf courses and other non-agricultural uses, keep unprotected persons out of treated areas until sprays have dried.

#### **GENERAL INFORMATION**

Read all directions before using this product.

**TNC Biological Fungicide** is an emulsifiable concentrate containing cold pressed neem oil and caprylic acid [(plant extracted fatty acid)] for the broad spectrum control of diseases listed in this label on vegetables, fruits, tree crops, grapes, agronomic crops, ornamental plants, greenhouses, and other plants listed below.

**TNC Biological Fungicide** is a contact fungicide that provides effective disease control when applied before or at the onset of the disease [both as a preventative and curative treatment].

The active ingredients of TNC Biological Fungicide, Cold Pressed Neem Oil and Caprylic Acid are exempt from the requirement of a tolerance.

- Thorough coverage is key to providing good disease control.
- For best results maintain constant agitation in spray tank and apply immediately.
- For optimal performance do not mix with cold water (less than 45°F).
- Application in early morning/late evening is recommended to minimize the potential for leaf burn.
- Do not apply under high humidity and temperature condtions >90°F.
- Do not apply to wilted or stressed plants and newly germinated or transplanted crops prior to root establishment.
- Use with care on plants with tender tissue. Test on a small area prior to broader use.
- Do not apply to sensitive plant species such as poinsettias, impatiens, hibiscus flowers, certain carnation and rose flower species, ornamental olive trees and comice pear.
- Weather conditions, intensity, type and physical stages of the pests, and treated crop can influence the degree of product efficacy.

#### **APPLICATION RATES**

#### Foliar Application:

 Use a concentration of 0.2 - 0.8% v/v up to a maximum use rate of 20 fl. oz. TNC Biological Fungicide per acre.

#### Soil Applications:

 Use a concentration of 0.2 – 0.8% v/v. Do not exceed a maximum use rate of 20 fl. oz. TNC Biological Fungicide per acre.

#### MIXING INSTRUCTIONS

#### **TNC Biological Fungicide Alone:**

**TNC Biological Fungicide** is an emulsifiable concentrate and requires only water for the appropriate use dilution. Additional surfactant is not required.

- Shake the container well before use.
- Add TNC Biological Fungicide to a clean spray tank half-filled with water and agitate.
- Next, add additional water to final spray volume, while maintaining continuous agitation.
- For optimal performance the finished spray solution should be between pH 5.5 and 7.0.

- Best results are achieved by using a spray water with a temperature of 45°F or warmer.
- If water temperature is below 45°F, achieve a good emulsion by premixing **TNC Biological Fungicide** at 1:1 ratio with tepid water, add to half-filled spray tank, agitate, then fill to final spray volume.
- Agitate continuously during mixing and application to prevent separation of the emulsion. Inadequate agitation can cause a non-uniform dilution resulting in crop injury and/or reduced efficacy.
- Always use the spray solution promptly after mixing and do not allow mixture to sit for extended periods of time. If allowed to sit, agitate thoroughly before resuming application.

**TNC Biological Fungicide** may solidify at temperatures below 50°F. If solidified, thaw the product by setting out in temperatures over 80°F and agitating well before mixing with water.

## **Mixing Order for Tank Mixes:**

- Fill clean spray tank with water to 1/3 of the required spray volume.
- Start agitation.
- Add different formulation types in the following order: 1) water dispersible granules, 2) wettable powders.
- Maintain agitation and add water to ¾ of final spray volume.
- Next add **TNC Biological Fungicide**, other emulsifiable concentrates, water-based solutions, adjuvants, surfacts, oils and/or fertilizers.
- Agitate to achieve complete emulsification. Do not use if a uniform, cloudy emulsion is not formed.
- Continue adding water and agitating to desired final spray volume.
- Always use the spray solution promptly after mixing with water.
- Do not let tank mixture sit for an extended period of time. If tank mixture is allowed to sit, agitate thoroughly again prior to and during application. Sparger line agitators are preferred.
- Tank-mix combinations can alter the pH of the finished spray solution. Adjusting the spray mixture pH to a range between 5.5 and 7.0 will provide optimal performance.
- DO NOT tank mix with sulfur or sulfur containing products.

#### **TANK MIX COMPATIBILITY:**

To determine the physical compatibility of **TNC Biological Fungicide** with other products, test as described below before mixing.

**Jar Compatibility Test:** Using a quart jar, add the proportionate amounts of products to be tank mixed to 1 quart of water in the following order. Add wettable powders and water-dispersible granular products first, then add liquid flowables, then add emulsifiable concentrates and solutions last. After thoroughly mixing by agitation, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for adding required ingredients to the spray tank. All

possible tank mixes on all crops have not been tested. Growers must test tank mix combinations for phytotoxicity on a sample of plants prior to use. Do not use mixtures of incompatible products as it may cause phytotoxicity or result in lowered effectiveness.

Always read and follow the directions for use, precautions and limitations for use on all product labels used in combination. Applications must follow the precautions and limitations of the most restrictive product label in the mixture. Do not exceed the dosage rates of any product. Check compatibility by using the correct proportion of the products in a small test container.

DO NOT tank mix with sulfur or sulfur containing products.

## **APPLICATION DIRECTIONS**

Apply **TNC Biological Fungicide** as a foliar spray or as soil treatment (soil drench, infurrow, drip-applied) using thoroughly clean equipment. Applications can be made with any powered or manual pesticide application equipment including high volume, low volume, ultra-low volume, electrostatic, air blast, and fogging equipment. When applied as a foliar application, ensure complete coverage of the plant surfaces, but avoid pooling or run off. Follow the original equipment manufacturer's instructions.

## **FUNGICIDE FOLIAR USE**

To control listed diseases, apply **TNC Biological Fungicide** in sufficient amount of water and with adequate spray pressure to achieve thorough coverage of plant surfaces. **TNC Biological Fungicide** is most effective when applied before the onset of disease development. Apply **TNC Biological Fungicide** per acre at a concentration of 0.2 – 0.8% v/v. Spray early in the morning or in the evening for best results. Repeat application if it rains within four hours of spraying. Avoid spraying under conditions of high humidity and high temperature (>90°F). Do not tank mix with any sulfur or sulfur containing products.

Crop	Pest	Concentration	Spray Interval
All crops except Grapes	See Diseases Section	0.2 - 0.8%	7-14 days
Grapes	Powdery Mildew, Stem Mildew, Sour Rot	0.2 - 0.8%	7-14 days from pre-bloom through veraison
	Botrytis		Spray at bloom, pre-bunch closure, veraison and 14 days after veraison

#### **FUNGICIDE SOIL TREATMENT**

To control listed soil-borne disease, apply as a soil application (soil drench, in-furrow, dripapplied) at 0.2-0.8~(v/v) in sufficient amount of water to deliver complete and thorough coverage. When applied as a soil drench, avoid excess run off. For best results repeat the applications as necessary.

#### CHEMIGATION INSTRUCTIONS

#### GENERAL CHEMIGATION REQUIREMENTS

Apply this product only through in-furrow or drip (trickle) irrigation & system(s). 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.

When a supply tank is used, frequent agitation is necessary. Apply in the second half of the water application to deliver **TNC Biological Fungicide** to the soil pests.

#### **FURROW CHEMIGATION REQUIREMENTS**

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:

- 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 which 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.

#### DRIP CHEMIGATION REQUIREMENTS

- 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 which 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.

Dilution Table for Foliar Applications (1 to 20 gallons per acre)				
Gallons of Water	0.2% v/v	0.4% v/v	0.6% v/v	0.8% v/v
1	⅓ fl oz (½ Tbsp*)	½ fl oz (1 Tbsp)	¾ fl oz (1 ½ Tbsp)	1 fl oz (2 Tbsp)
5	1 ¼ fl oz (2 ½ Tbsp)	2 ½ fl oz (5 Tbsp)	4 fl oz	5 fl oz
10	2 ½ fl oz (5 Tbsp)	5 fl oz	8 fl oz	10 fl oz
20	5 fl oz	10 fl oz	15 fl oz	20 fl oz

<sup>\*</sup>Tbsp – Abbreviation for Tablespoon. 1 Tablespoon is equal to ½ fluid ounce

**PHYTOTOXICITY:** To avoid plant damage, test for crop response by applying the mixed spray solution on a small portion of the area to be treated before applying to the entire area. Make foliar applications in conditions that favor fast drying. Avoid applications during hot temperature conditions >90F. Make applications early morning/late afternoon to avoid leaf burn. Not all possible mixtures of pesticide sprays, fertilizers, surfactants, and adjuvants have been tested. Therefore, it is the responsibility of the user to test spray mixtures to small areas to ensure crop safety before treating the entire area.

Swiss chard

{Note: Texts in [ ] are optional language. Texts in { } are notes for reviewers.}

**USE SITES** 

**TNC Biological Fungicide** may be applied to the following food and non-food crop groups. [The active ingredients of TNC Biological Fungicide, Cold Pressed Neem Oil and Caprylic Acid are exempt from the requirement of a tolerance.]

## [Crop Group 3 -] Bulb Vegetable Crops such as:

Garlic Onion Leek Shallot

## [Crop Group 9 -] Cucurbit Crops such as:

Cantaloupe Honeydew Melon Squash, Summer
Crenshaw Melon Persian Melon Squash, Winter
Cucumber Pumpkin Watermelon

## [Crop Group 8 -] Fruiting Vegetable Crops such as:

Eggplant Tomatillo Pepper Tomato

## [Crop Group 4 & 5 -] Leafy & Brassica (Cole) Vegetable Crops such as:

Arugula Cilantro Mustard green
Broccoli Collard Parsley
Brussel sprout Endive Radicchio
Cabbage Greens Rhubarb
Celery Kale Spinach

Kohlrabi

Cauliflower Lettuce

## [Crop Group 6 -] Legume Crops such as:

Chinese cabbage

Bean Lentil
Chickpea Pea
Guar Soybean

## [Crop Group 1 -] Root & Tuber Vegetable Crops such as:

Articoke Horseradish Radish

Beet Parsnip Sweet Potato

Carrot Potato Yam

[Crop Group 13 -] Small Fruit & Berry Crops such as:

Blackberry Kiwifruit
Blueberry Raspberry
Cranberry Strawberry

Grape

[Crop Group 10, 23 & 24 -] Citrus & Tropical Fruit Crops such as:

Avocado Grapefruit

Banana Guava Olive
Citrus Lemon Orange
Date Lime Papaya
Fig Mandarin Pineapple

Mango Pomegranate

[Crop Group 11 & 12 -] Pome & Stone Fruit Crops such as:

Apple Nectarine Peach
Apricot Pear Prune

Cherry Plum

[Crop Group 14 -] Tree Nuts such as:

Almond Filbert Pecan
Cashew Hickory Nut Pistachio

Chestnut Macadamia Nut

Coconut

[Crop Group 19 -] Herbs & Spices such as:

Basil Dill Poppy
Chamomile Fennel Rosemary
Chive Mint Sage
Cinnamon Mustard Tarragon
Clove buds Nutmeg Wintergreen

Cumin Pepper
Curry leaf Peppermint

[Crop Group 15 -] Ceral Grain Crops such as:

Barley Oats Triticale
Corn Rye Wheat
Millet Sorghum (Milo) Wild Rice

[Crop Group 18 -] Forage Crops such as:

Alfalfa Sainfoin
Clover Trefoil
Lupin Vetch

[Crop Group 20 -] Oilseed Crops such as:

Canola Cotton Sesame

Safflower Sunflower

Miscellaneous crops: peanut, hops, coffee, mushroom, okra, tobacco

Other Use Sites such as:

Ornamentals Greenhouses Sod Farms

Fencerows Nurseries Turf

## DISEASES

Use the following rate ranges and spray intervals to control the diseases listed below.

Crop	Pest	Concentration	Spray Interval
All crops	See below.	0.2 – 0.8%	7-14 days

**Foliar Fungal Diseases** 

Alternaria Fire Blight Scab

Anthracnose Mummy Berry Stem Mildew
Blight (early, late, leaf) Molds Southern Blight
Botrytis Powdery Midlew Sour Rot Grapes

Brown Rot Rust Walnut Blight

Downey Mildew

**Soil Fungal Diseases** 

Fusarium Oxyporum Macrophomina Rhizoctonia Solani

Pythium Verticillium

Phytophthora

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food or feed by pesticide storage or disposal.

**PESTICIDE STORAGE:** Do not store this product above 104°F or below 20°F for extended periods of time. Keep containers tightly closed and in original containers when not in use. Do not store exposed to ultraviolet light (sunlight) or moisture. Neem oil clouds and solidifies at temperatures below 59°F. If oil has solidified, gently thaw by exposing to temperatures over 80°F. Store in such a manner to prevent cross contamination with other pesticides, fertilizers, food and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Keep container closed when not in use.

**PESTICIDAL DISPOSAL:** To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

#### **CONTAINER HANDLING:**

{For 5-Gallon or Smaller Containers} Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or dispose of in trash or in a sanitary landfill or by incineration.

{For Containers Larger than 5 Gallons} Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or dispose of in trash or in a sanitary landfill or by incineration.

{For 250 or 275-gallon Refillable Containers} Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### IMPORTANT: READ BEFORE USE

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS**: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Seller. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Terramera, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a purpose or otherwise, that extend beyond the statements made on this label. No agent of Terramera, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Terramera, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Terramera, Inc.'s election, the replacement of product.

[Terramera is a registered trademark of Terramera, Inc.]

[Optional Marketing Claims For Sublabel B]

- [For] use in hydroponic systems
- For greenhouses, shadehouses, interiorscapes, mushroom houses, and nursery uses.
- For indoor and outdoor vegetables, ornamentals, flowers, trees, shrubs, container grown plants, and interiorscapes.
- [Can be used] for organic production

# TNC Biological Fungicide (EPA Reg. No. 88760-11) Sublabel C: Residential Use

## **TNC Biological Fungicide**

For Residential Use on Listed Crops including vegetables, fruits, citrus, nuts, [and] ornamental plants, lawns and other listed plants

## For Organic Gardening

## **Active Ingredient:**

Cold Pressed Neem Oil	52.0%
Caprylic acid	25.0%
Other Ingredients	23.0%
Total 1	00.0%

[This product contains 4.03 lbs of cold pressed neem oil and 1.94 lbs of caprylic acid per gallon.]

# KEEP OUT OF REACH OF CHILDREN WARNING / AVISO

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

### READ ALL DIRECTIONS BEFORE USING THIS PRODUCT

## **Shake Well Before Use**

[See back panel for first aid, precautionary statements, directions for use, storage and disposal statements, and warranty.]

**NET CONTENTS: 3 FL. OZ. to 5 GALLONS** 

EPA File Symbol: 88760-11 EPA Est. No. 49292-WA-001 Batch No.

Manufactured For: Terramera, Inc.

## 6920 Salashan Pkwy E-100 Ferndale, WA 98248

#### **FIRST AID**

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies, call the poison control center at 1-800-222-1222. For general information on this product, call 1-800-363-8607 (Monday through Friday, 9 AM to 5 PM PST).

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**WARNING:** Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

#### **ENVIRONMENTAL HAZARDS**

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

#### **DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

#### **GENERAL INFORMATION**

**TNC Biological Fungicide** controls listed diseases by inhibiting mycelial fungal growth. The efficacy of this product is dependent on weather conditions, intensity of pest population, area of application, and physical stages of pests and crops.

Do not store this product above 104°F or below 20°F for extended periods of time. Keep containers tightly closed and in original containers when not in use. Do not store exposed to ultraviolet light (sunlight) or moisture.

#### THAWING (MELTING) INSTRUCTIONS

Neem oil may solidify at temperatures below 50°F. Thaw (melt) solidified product by standing product container in warm water. Make sure cap is tightly closed. Or set out in temperatures over 80°F. Avoid direct exposure to temperatures over 104°F.

## **MIXING INSTRUCTIONS**

**TNC Biological Fungicide** contains cold pressed neem oil and requires only water for the appropriate use dilution. Add **TNC Biological Fungicide** to a mixing tank or spray bottle

with a little water and agitate thoroughly. For optimal mixing, ensure water temperature is above 45°F. Then add remaining water to the spray tank or spray bottle with continuous agitation. Agitate continuously while spraying. Non-uniform dilution can cause damage to plant or result in lowered effectiveness.

**CROP USES: TNC Biological Fungicide** may be used on bulbs, cucurbits, fruiting vegetables, leafy and brassica (cole) vegetables, legumes, root and tuber vegetables, small fruit and berries, citrus and tropical fruits, pome and stone fruits, tree nuts, herbs, and spices, grass, lawn, and ornamentals. See specific uses below.

#### **APPLICATION RATES:**

**To Control Diseases** use at 0.2 - 0.8% in sufficient amounts of water to achieve complete coverage with a 10-14 day interval.

#### **APPLICATION DIRECTIONS**

Apply **TNC Biological Fungicide** as a foliar spray or as soil drench to control listed pests. When applied as a soil drench, avoid excessive run off. When using as a foliar application, ensure thorough coverage of plant surfaces, but avoid pooling or run off.

Avoid spraying under conditions of high humidity and high temperature (>90°F). To avoid potential leaf burn, apply the product in early morning or late evening. Always test the product on a small portion of plants for compatibility before treating the entire plants.

## **Instructions for 1-Gallon Sprayer**

Pests	Fluid Ounces TNC Biological Fungicide per Gallon Water	Tablespoons (Tbsp) TNC Biological Fungicide per Gallon Water
Disease control	0.3 – 1.0 fl. oz.	½ − 2 Tbsp

#### Instructions for 32 fl. oz. (1 Qt.) Spray Bottle

Pests	Teaspoons (tsp) per 32 fl. oz. (1 Qt) Water	
Disease control	½ - 1½ tsp	

#### PESTS:

TNC Biological Fungicide may be used to control a variety of diseases listed below.

**Foliar Fungal Diseases** 

Alternaria Fire Blight Scab

Anthracnose Mummy Berry Stem Mildew Blight (early, late, leaf) Molds Southern Blight

Botrytis Powdery Midlew Sour Rot Grapes

Brown Rot Rust Walnut Blight

Downey Mildew

Soil Fungal Diseases

Fusarium Oxyporum Macrophomina Rhizoctonia Solani

Pythium Verticillium

Phytophthora

#### STORAGE AND DISPOSAL

Store in a cool dry place out of reach of children and pets and away from direct sunlight, windows, flames and other sources of heat or ignitions. Nonrefillable container. Do not reuse or refill this container. If empty: Place in trash or offer for recycling if available. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

#### **NOTICE:**

Terramera, Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions or under conditions not reasonably foreseeable to or beyond the control of Terramera, Inc., and, (2) buyer and user assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, TERRAMERA, INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

## [Optional Marketing Claims for Sublabel C]

- **TNC Biological Fungicide** is an effective biological fungicide for use on vegetables[, tree fruits] [, nuts] [, vines] [, citrus] [, ornamental flowers] [, shrubs and trees] [, grass lawns] [, and] [houseplants].
- For use on vegetables, [fruits,] [nuts,] [vines,] [citrus,] [ornamental plants,] [shrubs and trees,] [grass lawns,] [houseplants]
- [For] use in and around home and home garden
- [Can be used] for organic gardening
- For greenhouses, shadehouses, interiorscapes and home garden
- For indoor and outdoor vegetables, ornamentals, flowers, trees, shrubs, container grown plants, and interiorscapes.