

68539-3

9/26/2013

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



OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Mr. John Francis  
Technical Services Manager, BioWorks®, Inc.  
100 Rawson Road, Suite 205  
Victor, New York 14564

**SEP 26 2013**

**RE: Product Names:** T-22G Biological Fungicide; RootShield® Granules Biological Fungicide  
**EPA Reg. No:** 68539-3  
**Decision No:** D798793  
**Application for:** May 3, 2013  
**Notification Date:**

Dear Mr. Francis:

The Biopesticides and Pollution Prevention Division has received your application for Notification under PR Notice 98-10; we have determined that this action falls within the scope of this Notice. Our records have been duly noted, and an updated stamped label reflecting the addition of the qualifier—Not for Use in California, as it relates to certain crop groupings—will be placed in the registration jacket and uploaded to the Agency's Pesticide Product Label System.

A stamped copy of the label is enclosed for your records. If you have any questions regarding this letter, please contact Kathleen Martin of my staff ([martin.kathleen@epa.gov](mailto:martin.kathleen@epa.gov); 703-308-2857).

Sincerely,

A handwritten signature in black ink that reads "Kimberly Nesci".

Kimberly Nesci, Chief  
Microbial Pesticides Branch  
Biopesticides and Pollution Prevention Division

Enclosure: T-22G Biological Fungicide Stamped Label



United States  
**Environmental Protection Agency**  
 Washington, DC 20460

Registration  
 Amendment  
 Other

OPP Identifier Number

**Application for Pesticide - Section I**

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

**Section - II**

Amendment - Explain below.  Final printed labels in response to Agency letter dated \_\_\_\_\_  
 Resubmission in response to Agency letter dated \_\_\_\_\_  "Me Too" Application.  
 Notification - Explain below.  Other - Explain below.

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

Notification to add the qualifier "Not for Use in California" to the label as it relates to certain crop groupings. Please see attached notification statement.

**Section - III**

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input checked="" type="checkbox"/> Paper <input type="checkbox"/> Other (Specify) _____
* Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt No. per container

3. Location of Net Contents Information  
 Label  Container

4. Size(s) Retail Container  
10,40,500,1000

5. Location of Label Directions  
 On Label  On Labeling accompanying product

6. Manner in Which Label is Affixed to Product  
 Lithograph Paper glued Stenciled  Other \_\_\_\_\_

**Section - IV**

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)

Name Jamie Aggas	Title Regulatory Coordinator	Telephone No. (Include Area Code) 585-924-4362
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**Certification**  
 I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature  
*Jamie Aggas*

3. Title  
Regulatory Coordinator

4. Typed Name  
Jamie Aggas

5. Date  
May 3, 2013

6. Date Application Received (Stamped)



# T-22G

## Biological Fungicide

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(Alternate Brand Names: RootShield® Granules Biological Fungicide; T-22 G Granules Biological Fungicide)

### ACTIVE INGREDIENT

*Trichoderma harzianum* Rifai strain T-22\* ..... 1.15%

**OTHER INGREDIENTS** ..... 98.85%

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

\*Contains at least  $1.0 \times 10^7$  colony forming units per gram dry weight.

**Notification Accepted**

Date: September 26, 2013

Reviewer: Kathleen Martin  
Microbial Products Bior

**KEEP OUT OF REACH OF CHILDREN**

## CAUTION

### FIRST AID

**If in eyes**

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

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

[See attached label booklet for First Aid, Precautionary Statements, Storage and Disposal Instructions and Directions for Use]

### PRECAUTIONARY STATEMENTS

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS - CAUTION:** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wear protective eyewear. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

### PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear protective eyewear, long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks. Mixer/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization. Follow manufacturer's directions 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:

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. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### ENVIRONMENTAL HAZARDS:

For terrestrial uses: Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.

EPA Reg. No.: 68539-3

EPA Est. No.: 068539-NY-001

Manufactured by: BioWorks, Inc., 100 Rawson Road, Ste. 205, Victor, NY 14564 (800) 877-9443

www.bioworksinc.com

Net Weight: \_\_\_\_\_

Lot No.: \_\_\_\_\_

MASTER LABEL

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T-22G Biological Fungicide; EPA Reg. No. 68539-3

Notification to add California qualifier, May 3, 2013

Expires: \_\_\_\_\_ (Date will be 184 days after production)

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### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected workers may be in the area during application. For any requirement 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 (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

No REI is required as this product is soil incorporated, and the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

### PRODUCT INFORMATION

T-22G Biological Fungicide is a preventative biological fungicide for control of soilborne plant pathogens and plant root diseases. The active ingredient is a microbe, *Trichoderma harzianum* Rifai strain T-22, which when applied as an inoculant to soil or planting mixes, grows onto plant roots as they develop and provides protection against plant root pathogens such as *Pythium*, *Rhizoctonia*, *Fusarium*, *Cylindrocladium* and *Thielaviopsis*.

T-22G Biological Fungicide can be used in combination with or in rotation with other fungicides, insecticides, miticides, fertilizers or micronutrients in accordance with the more restrictive of label limitations and precautions.

Do not exceed label dosage rates. This product cannot be used with any product containing a label prohibition against such mixing. This product is not compatible with chemicals that contain the following active ingredients: imazilil, propiconazole, tebuconazole, and triflumizole. Do not apply T-22G Biological Fungicide immediately before these pesticides are used. Where early season seed rot and seedling diseases are expected, use chemically treated seed or other appropriate measures for stand establishment and T-22G Biological Fungicide for root disease control.

Note: T-22G Biological Fungicide contains live spores of a microbe that must be used prior to disease onset. T-22G Biological Fungicide becomes active in soil or on plants when temperatures are above 50°F and is not effective while temperatures remain cold. T-22G Biological Fungicide can be applied to sterilized or fumigated soil but must be applied after sterilization or fumigation.

This biological fungicide is for use in soil applications (in soil furrow and potting soil) for all listed crops.

### USE RESTRICTIONS

Do not apply this product as a broadcast application. Cover applied product with soil or otherwise incorporate it into soil.

For certain crop groupings, indicated below, this product is not for use in California.

**DO NOT APPLY to sugarcane, peach, rice, mushrooms, kiwi, tobacco, barley, oats, lemon, apple, and chickpea. Not for use on aquatic crops.**

### APPLICATION INSTRUCTIONS

APPLY VIA GROUND APPLICATION ONLY.

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**CROPS ON WHICH T-22G BIOLOGICAL FUNGICIDE MAY BE USED:**

CROPS	USE	APPLICATION RATE of T-22G BIOLOGICAL FUNGICIDE
<b>Berries and Small Fruits:</b> Blackberries, Blueberries, Currants, Elderberries, Gooseberries, Huckleberries, Loganberries, Raspberries, Strawberries, Grapes	In-furrow	2.5 – 6.0 lb / ½ acre
<b>*Bulb Vegetables:</b> Garlic, Leeks, Onions, Shallots	In-furrow	2.5 – 6.0 lb / ½ acre
<b>*Cereal Grains:</b> Buckwheat, Corn (grain, sweet corn, popcorn, high oil)	In-furrow	2.5 – 6.0 lb / ½ acre
<b>Citrus Fruits:</b> Citrus Hybrids, Grapefruit, Kumquat, Limes, Oranges, Pummelos	In-furrow	2.5 – 6.0 lb / ½ acre
<b>*Cucurbit Vegetables:</b> Cucumbers, Melons (i.e., Chinese waxgourd, Citron melon, Muskmelons, or Watermelon), Gourds Pumpkins, Squash	In-furrow	2.5 – 6.0 lb / ½ acre
<b>Flowers, Bedding Plants, and Ornamentals</b>	In-furrow Greenhouse planting mix Nursery planting mix Nursery bed application	2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix 1.0 – 3.0 lb / cubic yd soil mix 0.5 – 7.5 lb / 1000 sq ft, incorporate with rake or tiller
<b>Fruiting Vegetables:</b> Eggplant, Sweet and Hot Peppers, Tomatillos, Tomatoes	In-furrow Greenhouse planting mix	2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix
<b>Herbs and Spices</b>  <b>Mints</b>	In-furrow Greenhouse planting mix  In-furrow Greenhouse planting mix	2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix  2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix
<b>Leafy and Brassica (Cole) Leafy Vegetables:</b> Arugula, Celery, Chervil, Endive, Fennel, Lettuce (head and leaf), Parsley, Radicchio, Rhubarb, Spinach, Swiss	In-furrow Greenhouse planting mix Nursery bed application	2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix 0.5 – 7.5 lb / 1000 sq ft, incorporate with rake or tiller

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CROPS	USE	APPLICATION RATE of T-22G BIOLOGICAL FUNGICIDE
Chard, Broccoli, Brussels Sprouts, Cabbage, Cauliflower, Collards, Kale, Kohlrabi, Mustard Greens		
<b>Asparagus</b>	In-furrow Greenhouse planting mix Nursery bed application	2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix 0.5 – 7.5 lb / 1000 sq ft, incorporate with rake or tiller
<b>*Legume Vegetables (Succulent or Dried):</b> Beans (soybean, snap, dry), Lentils, Peas	In-furrow	2.5 – 6.0 lb / ½ acre
<b>*Oilseed Crops:</b> Cotton, Canola, Safflower, Sunflower	In-furrow	2.5 – 6.0 lb / ½ acre
<b>Pome Fruits:</b> Pears, Quince	In-furrow Greenhouse planting mix Nursery planting mix Trees and shrubs	2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix 1.0 – 3.0 lb / cubic yd soil mix 0.2 – 8.0 oz / transplant hole and incorporate
<b>*Root and Tuber Vegetables:</b> Beets, Sugar Beets, Carrots, Celeriac, Chicory, Horseradish, Parsnip, Radish, Rutabaga, Salsify, Turnips, Ornamental Root and Tuber Vegetables  Potatoes, Sweet Potatoes, Yams, Jerusalem Artichoke, Cassava, Ginger	In-furrow Planting hole	1.0 – 3.0 lb / cubic yd soil mix 0.2 – 8.0 oz / transplant hole and incorporate
<b>Shadehouse and Outdoor Nursery Crops:</b> Deciduous trees (i.e., Maple, Oak), Ornamentals, Pine	In-furrow Shadehouse or outdoor nursery use Nursery planting mix Nursery bed application  Trees and shrubs	2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix, incorporate with rake or tiller 1.0 – 3.0 lb / cubic yd soil mix 0.5 – 7.5 lb / 1000 sq ft, incorporate with rake or tiller 0.2 – 8.0 oz / transplant hole and incorporate
<b>Stone Fruits:</b> Apricots, Cherries, Nectarines, Peaches, Plums, Prunes	In-furrow Greenhouse planting mix Nursery planting mix Trees and shrubs	2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix 1.0 – 3.0 lb / cubic yd soil mix 0.2 – 8.0 oz / transplant hole and incorporate

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CROPS	USE	APPLICATION RATE of T-22G BIOLOGICAL FUNGICIDE
Tree Nuts: Almonds, Beech Nuts, Brazil Nuts, Butternuts, Cashews, Chestnuts, Filberts, Hickory Nuts, Macadamia Nuts, Pecans, Pistachios, Walnuts	In-furrow Greenhouse planting mix Nursery planting mix Trees	2.5 – 6.0 lb / ½ acre 1.0 – 3.0 lb / cubic yd soil mix 1.0 – 3.0 lb / cubic yd soil mix 0.2 – 8.0 oz / transplant hole and incorporate

\* Not for use in California

**IN-FURROW SOIL TREATMENT:** Apply T-22G Biological Fungicide from a granular applicator at the rate of 2.5 – 6.0 pounds per ½ acre. Apply granules using a metering device, such as a Gandy applicator or equivalent, mounted to deliver granules into the furrow just behind the furrow opener. Apply in furrow at seeding or to established crops as a side dress and incorporate into soil.

**GREENHOUSE PLANTING MIX AMENDMENT:** Mix T-22G Biological Fungicide with planting mixes at a rate of 1-3 pounds per cubic yard (loose) mix. Thoroughly incorporate T-22G Biological Fungicide into planting mixes during mix preparation or at pot filling.

**NURSERY PLANTING MIX AMENDMENT AND NURSERY BED APPLICATION:** For nursery planting mixes, apply T-22G Biological Fungicide at the rate of 1-3 pounds per cubic yard (loose) mix. For nursery beds, incorporate T-22G Biological Fungicide at a rate of 0.5-7.5 pounds per 1000 square feet of bed by raking or tilling. Application of irrigation water will help move T-22G Biological Fungicide into the soil. If soil is fumigated or steam sterilized, apply T-22G Biological Fungicide after treatment.

**TREES AND SHRUBS:** Apply T-22G Biological Fungicide to the planting hole at a rate of 0.2 - 8.0 ounces and incorporate into the planting soil or soil mix.

**STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Store in a cool, dry place. Do not store near food or feed commodities. Do not store at temperatures above 75°F for prolonged periods. Product keeps best under refrigeration. Keep container tightly closed when not in use.

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

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container.

(10 lb unit packaged in polyethylene bag and placed into corrugated carton) Completely empty bag by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then offer for recycling if available, dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. If outer box is contaminated, dispose of in the same manner as required for the bag.

(40 lb bag, 500 lb bag, 1000 lb bag) Completely empty bag into application equipment. Then offer for recycling if available, dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.



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**NOTICE TO BUYER AND SELLER:** Seller warrants that this product conforms to the description on this label and is reasonably fit for the purposes stated on this label when used and stored in accordance with the directions for use. This warranty does not extend to use of this product contrary to label directions or under conditions not reasonably foreseeable by the Seller, and Buyer and User assume the risk of any such use. To the extent consistent with applicable law, Seller disclaims all other warranties, express or implied, including any warranty of fitness or merchantability. To the extent consistent with applicable law, Seller shall not be liable for consequential, special or indirect damages resulting from use or handling of this product, and Seller's sole liability and Buyer's and User's exclusive remedy shall be limited to refund of the purchase price.

This product is sold only for uses stated on its label.

Country: United States of America

[In Case of Emergency, Call CHEMTREC: (800) 424-9300]

[Manufactured in the United States of America (USA) by: BioWorks Inc. [Company Logo]]