71927-1

10/19/2005

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# **DUTCH TRIG**

Biological vaccination for American elms to prevent Dutch elm disease For use by Professional Arborists/Applicators

This label must be in the possession of the user at the time of application

#### INGREDIENTS

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<ul> <li>Active Ingredient:</li> <li>OtherIngredients:</li> </ul>	Verticillium isolate WCS850* Distilled water**	1.0% <u>99.0%</u>
• Total:		100.0%

\*Product contains at least 8.0 x 10<sup>6</sup> conidia per ml of formulated product.

 \*\* H<sub>2</sub>0 only, distilled, inert, non-reactive, and free of other bacterial or fungal microbes until seal is broken

EPA Reg. No. 71927-R

EPA Prod. Est. No. 71927-NLD-001

#### STOP-READ THE LABEL BEFORE USE

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

## **CAUTION-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)

FIRST AID		
If in eyes:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes.	
	• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.	
	• Call a poison control center or doctor for treatment advice.	
If on skin or clothing:	Take off contaminated clothing.	
	• Rinse skin immediately with plenty of water for 15-20 minutes	
	• Call a poison control center or doctor for treatment advice.	
Important:	• Have the product container or label with you when calling doctor, or going for treatment	

Read directions for use and additional precautionary statements before use

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Net contents per vial: 40 ml

ARCADIS Innovative Tree Services 1114 Benfield Boulevard, Suite A Millersville, Maryland 21108 USA

## PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals

#### **CAUTION:**

Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. If in eyes, flush eyes with plenty of water. Get medical attention if irritation occurs or persists.

#### **Personal Protective Equipment (PPE):**

Applicators and other handlers must wear: Long sleeved shirt and long pants Waterproof gloves Shoes plus socks.

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

4

#### USER SAFETY RECOMMENDATIONS

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

**Environmental Hazards:** Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean water high-water mark. Do not contaminate water by cleaning of equipment or disposal of equipment wash waters.

#### STORAGE AND DISPOSAL

- DO NOT CONTAMINATE WATER, FEED OR FOODSTUFF BY STORAGE OR DISPOSAL.
- STORAGE: Dutch Trig vials, which contain live *Verticillium* spores, must be kept refrigerated at 33 to 40°F from receipt until shortly before use. Use Dutch Trig before the expiration date. Prevent Freezing of the product. Store vials lying down.
- CONTAINER AND PESTICIDE DISPOSAL: Triple rinse (or equivalent). Do not reuse container. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

#### 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. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.
- Both Dutch Trig and Tree Inoculation tool to be used for inoculation of American elms only!
- Keep product and inoculation tool out of reach of Children. The inoculation tool is NOT a toy.
- Avoid treating trees in the proximity of crops susceptible to *Verticillium* without the consent of the grower due to the unknown possibility that treated trees may produce infectious inoculum.

#### **GENERAL INFORMATION**

Dutch Trig contains conidiospores of the hyaline form of *Verticillium* isolate WCS 850. Dutch Trig is a biological treatment used to prevent Dutch elm disease based on the process of optimizing the trees natural mechanisms to stop a Dutch elm disease (DED) infection, called induced resistance.

Dutch Trig is injected in the trunk of the elm in the early spring after bud break with the ARCADIS gouge pistol. The ARCADIS gouge pistol is the closed system in which spores of *Verticillium* isolate WCS 850 are injected from the sealed vial into the trunk of an elm. The vaccine induces the tree's immune system to respond; there is no direct interaction between the DED fungus and Dutch Trig of any kind.

## APPLICATION INSTRUCTIONS

## <u>GENERAL</u>

- Keep Dutch Trig refrigerated at 33 to 40°F from receipt until shortly before use.
- Transport Dutch Trig in a portable refrigerator to the treatment location.
- Application of Dutch Trig may only be executed with ARCADIS gouge pistol.
- Only inject healthy elm trees which show no signs of Dutch elm disease for Dutch Trig has no curative properties.

## TREATMENT

- 1. Remove the plastic cap of the vial.
- 2. Place aluminum cap with silicone membrane on the vial. Shake vial gently before use.
- 3. Load the vial containing Dutch Trig into the injector.
- 4. Place one injection every 10 cm (approximately 4 inches) of tree circumference. Make injections in the bark fissures.
- 5. Make the injections at a comfortable waist height.
- 6. Push the chisel through the bark with the tip pointing downwards under a slight angle (see picture) up to the point where resistance is encountered (xylem tissue). Do not push the chisel further into the tree.
- 7. Inject one drop of product with one slow and full pull of the trigger. The total volume depends on tree size.
- 8. Twist the gun slightly sideways to create an opening. The vaccine will be sucked into the tree through the xylem tissue.
- Clean the chisel with rubbing alcohol when moving from site to site spread of other diseases.

#### <u>TIMING</u>

- Injections must be made after bud break but before full leaf.
- Only inject if there is uptake of the liquid into the tree.
- Inject during daytime.
- Do not inject when it is raining.

## STORAGE STABILITY

- Do not use Dutch Trig after the expiration date (see exp. date on vial).
- When a vial has been opened for use, continue to keep cool between treatments and during storage. Once opened, use all product within <u>24</u> hours. If opened vial is not refrigerated, use contents within 8 hours.
- The contents of the vial should appear clear. If a whitish growth or other discoloration appears, do not use.

<u>NOTES</u>

- Dutch elm disease control is most effective when Dutch Trig is used in conjunction with other cultural practices recommended for prevention (checking trees for symptoms during the growing season, removal of dead and diseased elm trees and severing of root grafts between healthy and infected trees).
- The Dutch Trig treatment provides protection against Dutch elm disease for the current year only.
- To ensure ongoing protection, repeat application every year.
- Dutch Trig has no curative properties and will not cure trees that are already infected.

## WARRANTY

Seller makes no warranty, express or implies, of merchantability, fitness or otherwise concerning the use of this product other than indicated on the label. User assumes all risks of use, storage, or handling not in strict accordance with label instructions.

