

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

January 29, 2018

Kim Davis Agent for ArborSystems, Inc. d/b/a ArborSystems c/o RegWest Company, LLC 8203 West 20<sup>th</sup> Street, Suite A Greeley, CO 80634

Subject: Notification per PRN 98-10 – Reformatting label

Product Name: TERRIER Systemic Antibiotic

EPA Registration Number: 69117-10 Application Date: November 09, 2017

Decision Number: 535946

Dear Ms. Davis:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped "Notification" and will be placed in our records.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements 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 Agency 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.

If you have any questions, you may contact Fatima Sow at (703) 347-8308 or via email at <a href="mailto:sow.fatima@epa.gov">sow.fatima@epa.gov</a>.

Sincerely,

Hope Johnson, Product Manager 21 Fungicide Branch Registration Division (7505P) Office of Pesticide Programs {<u>Sublabel</u> <mark>Subpart</mark> A <mark>Label</mark>: For Use on <mark>Ornamental</mark> Trees Excluding Palms}

# TERRIER™ Systemic Antibiotic

{ABN: SPRINGER™ Systemic Antibiotic}

(Collapsible Pouch Label (TR-TAG) –used for all sizes)

# TERRIER™ Systemic Antibiotic

# **Active Ingredient:**

Oxytetracycline hydrochloride	4.3%
Other Ingredients	95.7%
Total	100.0%

# Keep Out of Reach of Children CAUTION

See booklet for First Aid, additional Precautionary Statements and complete Directions for Use.

EPA Reg. No. 69117-10 EPA Est. 69117-NE-1

# **ArborSystems**

800-698-4641 • Fax: 402-339-5011 P.O. Box 34645 • Omaha, NE 68134

{Affixed Booklet (TR\_BK) - Front Panel -used for all sizes}

# TERRIER™ Systemic Antibiotic An ArborSystems™ Direct-Inject™ Chemical

For suppression of certain diseases including bacterial leaf scorch, fire blight, yellows diseases and phloem necrosis on ornamental trees.

# An ArborSystems™ Direct-Inject™ Chemical

# **Active Ingredient:**

Oxytetracycline hydrochloride	4.3%
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Net Contents: 4 fl. oz. (120 ml) [Net Contents: 2 fl oz (60 ml)] [Net Contents: 1 qt. 2 fl. oz. (1000 ml)]

# Keep Out of Reach of Children CAUTION

See inside for First Aid, additional Precautionary Statements and complete Directions for Use.

Use within 6 months of the container-stamped packaged date.

# NOTIFICATION

69117-10

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

01/29/2018

{Affixed Booklet (TR-BK) - inside pages-used for all sizes}

TERRIER™ Systemic Antibiotic

An ArborSystems™ Direct-Inject™ Chemical

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For suppression of certain diseases including bacterial leaf scorch, fire blight, yellows diseases and phloem necrosis on ornamental trees.

An ArborSystems<sup>™</sup> Direct-Inject<sup>™</sup> Chemical

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Intended for use by arborists/applicators, grounds maintenance personnel and landscapers.

To be used only with the ArborSystems Wedgle® Direct-Inject™ Tree Injection System

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EPA Reg. No. 69117-10 EPA Est. 69117-NE-1

# First Aid

If Swallowed: Immediately call a poison control center or doctor for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

If on Skin or Clothing: Take off contaminated clothing. Immediately rinse skin with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For non-emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1.800.858.7378 (NPIC website: www.npic.orst.edu).

**Note to Physician:** There is no specific antidote available. Treat patient symptomatically.

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(Note: The First Aid statements' grid format will be used if market label space permits; otherwise a paragraph format will be used.)

# PRECAUTIONARY STATEMENTS

# Hazards to Humans and & Domestic Animals

CAUTION: Harmful if swallowed. Avoid contact with skin or clothing. Causes moderate eye irritation. Thoroughly wash with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC), Viton, Selection Category C). Avoid contact with eyes or clothing. Wear protective eyewear such as goggles or shielded safety glasses. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

# **Personal Protective Equipment**

Some materials that are chemical-resistant to this product are listed below. Applicators and other handlers must wear: Long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves, such as polyethylene, butyl rubber, neoprene rubber or Viton and protective eyewear such as goggles, face shield or safety glasses.

# **User Safety Requirements**

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.

# **User Safety Recommendations**

# Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Immediately remove clothing/PPE if pesticide gets inside; then thoroughly wash and put on clean clothing.
- Immediately remove PPE after handling this product. Wash the outside of gloves before removing. As soon as possible, thoroughly wash and change into clean clothing.

# **Environmental Hazards**

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.

## Physical or Chemical Hazards

Do not use or store near heat or open flame.

## DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

# ArborSystems<sup>™</sup> Wedgle<sup>®</sup> Direct-Inject<sup>™</sup> Tree Injection System

The ArborSystems™ Wedgle® Direct-Inject™ Tree Injection System is a no-drill trunk injection method that is easy to use. Most trees are treated in as little as 5 minutes or less, allowing applicators to treat trees quickly. There is no need to wait for absorption (translocation); chemical is injected into the cambial area (the active vascular system) of the tree. Because the chemical is placed right where the tree can use it, effectiveness of the chemical is increased. Use in sunny or overcast conditions, rainy or dry, at any time of day. As no drilling or implants are required, you can treat trees year after year, with no threat of long-term or permanent damage to the tree. This system minimizes wounding and promotes long-term tree health and vigor.

## Restrictions

This product is not to be used on trees or shrubs that will produce food within the year following treatment; during the year following treatment, do not use any part of treated trees or shrubs, including sap, as food or feed. Do not inject trees that are less than two inches in diameter.

This product contains the antibiotic oxytetracycline. To reduce the development of drug-resistant bacteria and maintain the effectiveness of this and other antibacterial products, this product should be used only to treat or prevent infections that are proven or strongly suspected to be caused by bacteria. This material is not to be used for medical or veterinary purposes.

#### **Product Information**

TERRIER™ Systemic Antibiotic [This product] is a ready-to-use antibiotic for non-crop bearing ornamental trees and large woody shrubs. TERRIER™ Systemic Antibiotic [This product] provides seasonal suppression of a variety of diseases including bacterial leaf scorch, fire blight, yellows diseases, phloem necrosis, mycoplasmas, xylem-limited bacteria (*Xylella fastidiosa*, BLS) and some bacterial blight diseases. Late summer or early fall applications provide disease suppression the following season. Some diseases may require repeated yearly application.

Preventative application is more effective than therapeutic treatment in trees showing disease symptoms. Apply as a preventative when other trees in the area are showing symptoms. In trees showing symptoms, begin treatment as soon as possible. Trees in advanced stages of disease development may not respond to treatment. Infected trees will absorb the chemical more slowly due to the vascular damage caused by the disease. If TERRIER $^{\text{TM}}$  Systemic Antibiotic [this product] is not absorbed within 24 hours, the tree is considered high risk and has a poor chance of survival.

# Dosage

Inject 1 to 2 ml per every 4" of trunk circumference measured within 12" of the ground using the Wedgle Direct-Inject Tree Injection System. Use Portle® Tips for injecting Sycamores or thick-barked hardwoods such as elms. For other trees, use Wedgle® Tips. Make all injections around the base (or flare) of the tree.

Diseases Treated	Application Timing	
Bacterial Leaf Scorch in Elm, Oak, Sycamore, Oleander, Sweet Gum (Liquidambar) (1)	Apply in late summer or early fall for preventive suppression the following season. Applications made in spring (April or May) will suppress current year symptoms.	

Fire Blight in Mountain Ash	Applications are most successful when made in early spring (January through May depending upon location) prior to or during bloom period. Applications made after bloom period will still prevent secondary twig infections. Fall applications are NOT recommended for fire blight suppression.	
Ash Yellows in Ash	Applications for treatment of ash yellows are most successful in the spring and early summer when leafout has reached at least 50% or more as adequate foliage is needed to assure translocation.	
Phloem Necrosis in Elm, also called Elm Yellow. (2) <sup>24</sup>	If phloem necrosis has been identified in nearby trees it is preferable to treat unaffected trees in late summer or early fall for preventive suppression the following season. Applications made in spring MAY suppress current year symptoms, however results on trees with symptoms is inconsistent.	

# Disease Notes

- 1. **Bacterial Leaf Scorch (BLS)** is a bacterial plant disease caused by a vascular clogging bacterium (*Xylella fastidiosa*) that rapidly multiplies within active plant xylem. Distinct scorch-like leaf symptoms are followed by twig and branch death leading to plant decline and death. BLS bacterium is spread from diseased to healthy plant material during feeding by common urban xylem-feeding insects such as leafhoppers and treehoppers.
- 2. Elms with phloem necrosis exhibit leaves which turn yellow (out of season) and may drop prematurely. On trees that survive over winter, leaves in the spring are small and sparse. Symptoms are quite similar to Dutch Elm Disease, however it is important to distinguish between the two diseases as treatments are different. In Elms with phloem necrosis the entire crown is likely to show symptoms at the same time with symptoms appearing from July to late September. With Dutch Elm Disease, usually one or several small branches in the upper crown show earlier symptoms, which may appear anytime during the growing season.

# How to Apply ArborSystems Direct-Inject Chemicals with ArborSystems Wedgle® Direct-Inject Tree Injection System

- 1. Use only ArborSystems Direct-Inject chemicals with your unit as they have been formulated specifically for the Wedgle Direct-Inject System.
- 2. Measure the circumference of the tree within 12" of the ground. Follow the label directions and application dosages in this booklet to determine the number of injection sites and the amount of chemical to be injected at each site.
- 3. Choose which style and length of ArborSystems Injection Tip is most appropriate for type of tree you are treating.
- 4. The injection unit is preset to deliver a 1 ml dose of chemical with each full stroke of the handles. If you need to inject a 0.5 ml dose of chemical, move the dose adjustment ring to the 0.5 ml dose adjustment groove.
- 5. Make injections working around base (or flare) of the tree. All injections should be made within 12" of the ground unless otherwise noted.
- 6. With a smooth motion, firmly squeeze the injection unit handles to deliver chemical into tree. Apply equal pressure on both handles unequal pressure may bend or break the tip.
- 7. Continue making injections moving around the tree until the entire tree trunk has been treated.
- 8. When removing tips from the tree, use a straight rearward motion. Avoid rocking motions as that may damage tips or the injection unit.
- 9. Tips should be cleaned after each use by submerging in alcohol or diluted bleach.
- 10. At the end of the day, water flush the Wedgle Direct-Inject unit to prevent clogging.

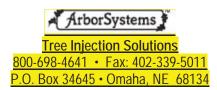
Avoiding chemical waste: Any time you remove a chemical pack (after making injections), there is approximately 2.5 ml of chemical retained in the injection unit. To avoid wasting this chemical, remove the chemical pack before making your final injections. You will be able to make two additional 1 ml doses with the chemical remaining in the injection unit.

# Storage and Disposal

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

Pesticide Storage: Store in a cool (>45°F) place with containers in an upright position. Do not expose material to high temperatures (>85°F) for prolonged periods. Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Container Handling: Non-refillable container; do not reuse or refill this container. Completely empty pack into application equipment, then offer for recycling, if available, or dispose of empty pack in a sanitary landfill or by incineration.

{Per PR Notice 2007-4 Batch Code/Lot Number will appear either on the label or the container.}



# **Notice of Warranty**

ArborSystems warrants that this product conforms to the chemical description on the label and is reasonably fit for use when used strictly in accordance with the directions on the labeling. To the extent consistent with applicable law, ArborSystems does not make or authorize any agent or representative to make any other warranty, guarantee or representation, express or implied, concerning this product.

# [Sold by:] ArborSystems™ The No-Drill Injection Solution [800-698-4641] • [Fax: 402-339-5011] P.O. Box 34645 • Omaha, NE 68134

Wedgle® and Portle® are registered trademarks of ArborSystems.

ArborSystems™, Terrier™, Springer™, Direct-Inject™ and WedgeChek™ are trademarks of ArborSystems.

Direct-Inject™ unit is protected by U.S. Patent #5,901,498.

Wedgle® Tip is protected by U.S. Patent #5,239,773.

WedgeChek™ is protected by U.S. Patent #5,797,215.

Portle® Tip is protected by U.S. Patent #7,178,286.

{<u>Cylinder</u> <del>Box</del> Label <u>(TR\_PL)-used for 2 and 4 fl oz sizes</u>}

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An ArborSystems™ Direct-Inject™ Chemical

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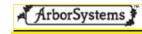
Total 100.0%

# Keep Out of Reach of Children CAUTION

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Net Contents: 4 fl oz (120 ml)
[Net Contents: 2 fl oz (60 ml)]

EPA Reg. No. 69117-10 EPA Est. 69117-NE-1



<u>Tree Injection Solutions</u> 800-698-4641 • Fax: 402-339-5011

P.O. Box 34645 • Omaha, NE 68134

Use within 6 months of the container-stamped packaged date.

## 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 handlers may be in the area during application.

The ArborSystems Wedgle Direct-Inject unit is designed to be used only with ArborSystems pre-packed chemicals. Tampering with packs or contents may cause non-warrantied damage to your injection system.

# Storage and Disposal

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[Sold by:]

ArborSystems<sup>TM</sup>

The No-Drill Injection Solution

[800-698-4641] • [Fax: 402-339-5011]

#### P.O. Box 34645 • Omaha, NE 68134

{Outer Box Pack Label (TR PXL) (TR 1MS)- used for all sizes}

# TERRIER™ Systemic Antibiotic An ArborSystems™ Direct-Inject™ Chemical

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[ ] Denotes alternate/optional language

{ } Denotes language that does not appear on market labeling

{Additional Selling/Marketing Copy for use in conjunction with promotional pieces: brochures; on the website; and in other promotional materials, displays, etc.}

ArborSystems™ Wedgle® Direct-Inject™ System

The ArborSystems Wedgle® Direct-Inject Tree Injection System is effective. Chemicals are injected directly into the tree. Because the chemical is placed right where the tree can use it, effectiveness of the chemical is increased and control of most problems can be seen in as little as three to five days. Also, because no chemical is lost in non-active wood, the Direct-Inject System allows you to use less chemical to achieve high levels of effectiveness; this saves money and reduces chemical waste. The Direct-Inject System injects chemicals into a tree with minimal wounding. With no holes to drill, no air or pathogens are allowed to enter the tree, potential decay never starts and long-term wounding is prevented. The tree's ability to move water and nutrients, and to store food, is not compromised.

Pre-mixed chemicals are supplied in self-sealing containers. After injections have been made, you have only one small container of which to dispose. Concerns you may have had when spraying will be eliminated. And with a closed system there is no mixing.

With no drilling required the ArborSystems Direct-Inject System:

- Minimizes wounding to keep out diseases, fungi, bacteria and insects.
- Prevents air from getting into the tree. When air is allowed into a tree's vascular system, it cuts off the flow of water and nutrients.
- Allows multiple or annual treatments without damaging the tree.
- Requires no drills, power supply or other bulky equipment.

With this system and chemicals, tree care experts effectively combat and manage many of the most devastating environmental plant threats.

The ArborSystems Wedgle® Direct-Inject System is designed to preserve and protect the natural and urban forest. Treat almost any tree in five minutes or less. The Direct-Inject System is an efficient chemical delivery system. You achieve control with less chemical because chemical is placed precisely where the tree can best use it. No chemical is lost in dead wood.

ArborSystems Direct-Inject chemicals are integral parts of the Wedgle Direct-Inject Tree Injection System. Use only ArborSystems Direct-Inject chemicals with the Wedgle Direct-Inject units. Using unauthorized chemicals with the ArborSystems Wedgle Direct-Inject System constitutes a violation of Federal law.

## **Chemical Selection**

Your distributor can advise you on the best chemical selections for trees in your area.

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{ABN: SPRINGER™ Systemic Antibiotic}

{Collapsible Pouch Label (SP TAG) -for all sizes}

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<u>An ArborSystems™ Direct-Inject™ Chemical</u>

<u>•Easy</u> •No drilling •Saves Time and Money

For seasonal suppression of lethal yellows (phytoplasma disease) on palms.

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If on Skin or Clothing: Take off contaminated clothing. Immediately rinse skin with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

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

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For non-emergency information concerning this product, call the National Pesticides Information Center (NPIC) at 1.800.858.7378 (NPIC website: www.npic.orst.edu).

Note to Physician: There is no specific antidote available. Treat patient symptomatically.

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# PRECAUTIONARY STATEMENTS

# Hazards to Humans and & Domestic Animals

CAUTION: Harmful if swallowed. Avoid contact with skin or clothing. Causes moderate eye irritation. Thoroughly wash with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride (PVC), Viton, Selection Category C). Avoid contact with eyes or clothing. Wear protective eyewear such as goggles or shielded safety glasses. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

# Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. Applicators and other handlers must wear: Long-sleeved shirt and long pants, shoes plus socks, chemical-resistant gloves, such as polyethylene, butyl rubber, neoprene rubber or Viton and protective eyewear such as goggles, face shield or safety glasses.

# **User Safety Requirements**

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.

# **User Safety Recommendations**

# Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Immediately remove clothing/PPE if pesticide gets inside; then thoroughly wash and put on clean clothing.
- Immediately remove PPE after handling this product. Wash the outside of gloves before removing. As soon as possible, thoroughly wash and change into clean clothing.

# **Environmental Hazards**

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.

## Physical or Chemical Hazards

Do not use or store near heat or open flame.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

# ArborSystems™ Wedgle® Direct-Inject™ Tree Injection System

The ArborSystems<sup>™</sup> Wedgle® Direct-Inject™ Tree Injection System, along with ArborSystems patented Portle® Tips and Palm Tips, is the ideal way to treat palms. This no-drill trunk injection method is easy to use. Palm and Portle Tips have been designed to penetrate the thick outer husks of palms. Several tip options are available allowing you to choose the tip best suited to treat palms of various husk density.

Most palms can be treated in as little as five minutes or less, allowing applicators to make treatments quickly. There is no need to wait for absorption (translocation); chemical is injected into the active portion of the palm without drilling. Because the chemical is placed right where the palm can use it, effectiveness of the chemical is increased. Use in sunny or overcast conditions, rainy or dry, at any time of day. As no drilling or implants are required, you can treat palms repeatedly with no threat of long-term or permanent damage. This system minimizes wounding and promotes long-term plant health and vigor.

## Restrictions

This product is not to be used on palms that will produce food within the year following treatment. Do not use any part of treated palms as food or feed. This product contains the antibiotic oxytetracycline. To reduce the development of drug-resistant bacteria and maintain the effectiveness of this and other antibacterial products, this product should be used only to treat or prevent infections that are proven or strongly suspected to be caused by bacteria. This material is not to be used for medical or veterinary purposes.

# **Product Information**

TERRIER™ Systemic Antibiotic [This product] is a ready-to-use antibiotic for use on palms. TERRIER™ Systemic Antibiotic [This product] provides suppression of lethal yellows disease (*phytoplasma* disease) in palms.

## **Symptoms**

Symptoms vary significantly based on the palm species, but generally occur in sequence; fruit drop, flower/seed wilt, excessive yellowing of the canopy starting with the newest fronds and finally death of the palm bud leading to death of the entire plant. Sometimes a younger frond will yellow early in the process. This "flag leaf" is often an early visual symptom, but not present in every case.

# **Treatment**

Preventative treatments are more effective than therapeutic treatment in palms showing disease symptoms. As a therapeutic measure, immediately begin applications to palms exhibiting symptoms and continue on a 3- to 4-month treatment schedule. Palms with over 25% discolored leaves are unlikely to respond to treatment. Preventive treatments are recommended to protect palms in areas where lethal yellowing is known or likely to occur. Apply preventive treatments any time during the growing season once every 3 to 4 months.

Tree	Disease	Dosage per Injection Site
Palm	For suppression of Palm Lethal Yellows	6 ml per 6" of trunk circumference
	disease ( <i>Phytoplasma</i> disease)	measured at chest height.

## {Optional paragraph format}

Palm: For suppression of palm lethal yellows: Apply 6 ml of TERRIER™ Systemic Antibiotic [this product] per 6" of trunk circumference measured at chest height.

# Palms Susceptible to Lethal Yellowing This chart is only intended as a general guide. Susceptibility may vary depending on your location and evolving conditions. Contact a trained arborist familiar with conditions in the area to determine treatment strategies. High susceptibility Coconut Palm, all cultivars, Cocos nucifera Christmas Palm, Adonidia merrilli Loula/Konna Palm, Pritchardia affinis Thurston Fan Palm, Pritchardia thurstonii Tonga/Figi Fan Palm, Pritchardia pacifica Canary Island Date Palm, Phoenix canariensis High/medium susceptibility Clustering Fishtail Palm, Caryota mitis Medjool Date Palm, Phoenix dactylifera Sylvester/Wild Date Palm, Phoenix sylvestris Aricuriroba, Syragus schizophylla Medium susceptibility Palmyra Palm, Borassus flabellifer Princess Palm, Dictosperma album Senegal Date Palm, Phoenix reclinata Windmill Palm, Trachycarpus fortunei Medium/low Chinese Fan Palm, Livistonia chinensis Latan Palm, Latania Iontaroides susceptibility Queen Palm, Syragus romanzoffiana Spindle Palm, Hyophorbe verschaffeltii

{Information in above chart may be used selectively.}

Undetermined level of susceptibility

Species thought to be resistant to

Low susceptibility

Lethal Yellows

# How to Inject Palms with ArborSystems Wedgle\* Direct-Inject Tree Injection System

Bizmarckai, Foxtail, Royal, Solitaire

Triangle Palm, *Dypsis decaryi* 

Lluvia, Rootspine, Seashore

Washingtonia/Mexican Fan, Washingtonia robusta

Belmore Sentry, Cabada, Cabbage/Sabal, Cliff Date, Footstool,

Gebang/Buri, Giant Fishtail, Kentia, Mazari, Miniature Sugar, Palma De

- 1. Use only ArborSystems Direct-Inject chemicals with your unit as they have been formulated specifically for the Wedgle Direct-Inject System.
- 2. Measure the circumference of the palm at chest height. Follow the label directions and application dosages in this booklet to determine the number of injection sites and the amount of chemical to be injected at each site.
- 3. Palms are treated using ArborSystems Palm or Portle Injection Tips, depending on the husk density. Choose which injection tips will work best for the palm you are treating and attach the appropriate tip to the ArborSystems Tip Setter. Using multiple tips will speed the injection process.
- 4. At chest height, tap the injection tip into the palm using the Tip Setter, then disconnect the setter from the tip leaving the tip in the palm. Repeat until all tips are set in the palm. Do not attempt to insert or remove tips with the injection unit as that is likely to damage the injection unit.
- 5. Connect the Wedgle Direct-Inject unit to one of the tips already inserted in the palm.
- 6. With a smooth motion, firmly squeeze the injection unit handles. Apply equal pressure on both handles—unequal pressure may bend or break the tip. The injection unit is preset to deliver a 1 ml dose of chemical with each full stroke of the handles. Repeat until the required amount of chemical has been injected at the injection site.
- 7. Remove the injection unit from the tip leaving the tip in the palm.

- 8. Move to the next tip and attach the injection unit to the tip. Continue making injections at all injection sites. After all injections have been completed, use the Tip Setter to remove the tips from the palm. When removing tips from the tree, use a straight rearward motion. Avoid rocking motions as that may damage tips.
- 9. Clean tips after each use by submerging in alcohol or diluted bleach.
- 10. At the end of the day, water flush the Wedgle Direct-Inject unit to prevent clogging.

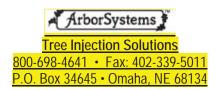
**Avoiding chemical waste:** Any time you remove a chemical pack (after making injections), there is approximately 2.5 ml of chemical retained in the injection unit. To avoid wasting this chemical, remove the chemical pack before making your final injections. You will be able to make two additional 1 ml doses with the chemical remaining in the injection unit.

# Storage and Disposal

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

Pesticide Storage: Store in a cool (>45°F) place with containers in an upright position. Do not expose material to high temperatures (>85°F) for prolonged periods. Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Container Handling: Non-refillable container; do not reuse or refill this container. Completely empty pack into application equipment, then offer for recycling, if available, or dispose of empty pack in a sanitary landfill or by incineration.

{Per PR Notice 2007-4 Batch Code/Lot Number will appear either on the label or the container.}



# **Notice of Warranty**

ArborSystems warrants that this product conforms to the chemical description on the label and is reasonably fit for use when used strictly in accordance with the directions on the labeling. To the extent consistent with applicable law, ArborSystems does not make or authorize any agent or representative to make any other warranty, guarantee or representation, express or implied, concerning this product.

[Sold by:]

ArborSystems™

The No-Drill Injection Solution
[800-698-4641] • [Fax: 402-339-5011]
P.O. Box 34645 • Omaha, NE-68134

Wedgle® Tip is a registered trademark of ArborSystems.

ArborSystems™, Terrier™, Springer™, Direct-Inject™ and WedgeChek™ are trademarks of ArborSystems.

Direct-Inject™ unit is protected by U.S. Patent #5,901,498.

Wedgle® Tip is protected by U.S. Patent #5,239,773.

WedgeChek™ is protected by U.S. Patent #5,797,215.

Portle® Tip is protected by U.S. Patent #7,178,286.

{<u>Cylinder Label (SP\_PL)</u> <del>Box</del> Label<mark>-used for 2 and 4 fl oz sizes</mark>}

TERRIER™ Systemic Antibiotic

An ArborSystems™ Direct-Inject™ Chemical

• Easy • No drilling • Saves Time and Money

For seasonal suppression of lethal yellows (phytoplasma disease) on palms.

# An ArborSystems™ Direct-Inject™ Chemical \*Easy \*No drilling \*Saves time and money

**Active Ingredient:** 

Oxytetracycline hydrochloride	4.3%
Other Ingredients	95.7%
Total	100.0%

# Keep Out of Reach of Children CAUTION

See booklet for First Aid, additional Precautionary Statements and complete Directions for Use.

Net Contents: 4 fl oz (120 ml)
[Net Contents: 2 fl oz (60 ml)

EPA Reg. No. 69117-10 EPA Est. 69117-NE-1



800-698-4641 • Fax: 402-339-5011 P.O. Box 34645 • Omaha, NE 68134

Use within 6 months of the container-stamped packaged date.

# **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 handlers may be in the area during application.

The ArborSystems Direct-Inject units are designed to be used only with ArborSystems' pre-packed chemicals. Tampering with packs or contents may cause non-warrantied damage to your injection system.

# Storage and Disposal

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

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Net Contents: 4 fl. oz. (120 ml) [Net Contents: 2 fl oz (60 ml)] [Net Contents: 1 qt. 2 fl. oz. (1000 ml)]

EPA Reg. No. 69117-10 EPA Est. 69117-NE-1 [Sold by:]

# <mark>ArborSystems™</mark>

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(Outer Box (SP PXL) (SP 1MS) Pack Label -used for all sizes)

TERRIER™ Systemic Antibiotic

An ArborSystems™ Direct-Inject™ Chemical

# TERRIER™ Systemic Antibiotic

For seasonal suppression of lethal yellows (phytoplasma disease) on palms.

An ArborSystems™ Direct-Inject™ Chemical

\*Easy \*No drilling \*Saves time and money

# **Active Ingredient:**

Oxytetracycline hydrochloride	4.3%
Other Ingredients	95.7%
Total	100.0%

# Keep Out of Reach of Children CAUTION

See booklet for First Aid, additional Precautionary Statements and complete Directions for Use.

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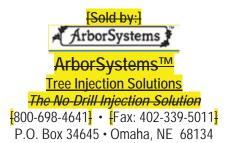
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[ ] Denotes alternate/optional language

{ } Denotes language that does not appear on market labeling

{Additional Selling/Marketing Copy for use in conjunction with promotional pieces: brochures; on the website; and in other promotional materials, displays, etc.}

# ArborSystems™ Wedgle® Direct-Inject™ System

The ArborSystems Wedgle® Direct-Inject Tree Injection System is effective. Chemicals are injected directly into the active area of the palm. Because the chemical is placed right where the palm can use it, effectiveness of the chemical is increased. The Direct-Inject System injects chemicals into a palm with minimal wounding. With no holes to drill, no air or pathogens are allowed to enter, potential decay never starts and long-term wounding is prevented. The palm's ability to move water and nutrients, and to store food, is not compromised.

Pre-mixed chemicals are supplied in self-sealing containers. After injections have been made, you have only one small container of which to dispose. Concerns you may have had when spraying will be eliminated. And with a closed system there is no mixing.

With no drilling required the ArborSystems Direct-Inject System:

- Minimizes wounding to keep out diseases, fungi, bacteria and insects.
- Prevents air from getting into the palm. When air is allowed into a palm's active system, it cuts off the flow of water and nutrients.
- Allows multiple or annual treatments without damaging the palm.
- Requires no drills, power supply or other bulky equipment.

With this system and chemicals, tree care experts effectively combat and manage many of the most devastating environmental plant threats.

The ArborSystems Wedgle Direct-Inject System is designed to preserve and protect the natural and urban forest. Treat almost any tree in five minutes or less. The Direct-Inject System is an efficient chemical delivery system. You achieve control with less chemical because chemical is placed precisely where the tree or palm can best use it.

ArborSystems Direct-Inject chemicals are integral parts of the Direct-Inject Tree Injection System. Use only ArborSystems Direct-Inject chemicals with the Wedgle Direct-Inject unit. Using unauthorized chemicals with the ArborSystems Direct-Inject System constitutes a violation of Federal law.

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