

# SHERRILLTREE SPOTLIGHT: DUTCH ELM DISEASE

## Treatments

**Arbotect**

**Alamo**

**Quali-Pro Propiconazole**

**TREE-age**

**AzaSol**

## Fertilizers

Dutch Elm Disease is one of the biggest killers of shade trees in the United States. This disease is actually a fungus transmitted by the Native Elm Bark Beetle, and has been devastating to the Elm population since the 1928. By now Dutch Elm Disease has spread to everywhere in America except for the desert Southwest. The beetle that transmits the disease is a natural enemy to the Elm tree, but on its own does very little damage to the tree. The fungus is what is responsible for the trees death. Treating the tree with an insecticide alone does almost nothing to treat the real problem. To save an infected Elm tree, you need to use a systemic fungicide.

The Dutch Elm Disease fungus causes an immune response in the Elm tree, where the tree plugs up its own xylem tissue in an attempt to stop the fungus from spreading. When too many channels are plugged up, it prevents water and nutrients from being distributed to the trees tissues. Early signs of an infestation include yellowing and wilting of high branches during the summer. This spreads to the rest of the tree, causing branch dieback. The roots will die after being starved of nutrients from the leaves

While the Bark Beetle itself is usually not damaging to the tree, once the tree is infected with DED and begins to be stressed, the insect causes additional damage which the tree can't protect itself from. A systemic insecticide can be applied to kill the beetle and reduce stress on the tree, after the fungal infection itself is taken care of.

The optimal treatment for an Elm tree that is already infected with DED is to combine the use of fungicides, insecticides and fertilizers. A fungicide will treat the fungus, which is the real Dutch Elm Disease. The insecticide will kill the bark beetle, which is stressing the tree by feeding on it. A fertilizer applied to the soil around the tree will give the tree the nutrients it needs to heal from the disease.

## TREATMENTS FOR THE DUTCH ELM DISEASE FUNGUS:

### Arbotect

Arbotect(Thiabendazole hypophosphite) systemic fungicide is the industry standard for treating Dutch Elm Disease. This product is injected into the tree root flares, providing rapid uptake and even distribution throughout tree tissues. Arbotect kills the fungus that causes Dutch Elm Disease, allowing the tree to begin healing itself. One injection of Arbotect can protect the tree from fungal transmission for three growing seasons. Arbotect has to be injected using a macro-infusion system.

Arbotect can be applied anytime from the time when leaves are fully enlarged until fall color begins.

**\*cannot be sold in NY**

### Application: macroinfusion tree injection

### Alamo

Alamo(Propiconazole) systemic fungicide is injected through the Arborjet Tree IV kit or a macroinfusion tree iv kit for the treatment of Dutch Elm Disease. It is recommended that Alamo be applied by trained professional. This product is best used as a preventative treatment for DED.

To determine the application/dose rate per tree:

- Refer to Table on product label. Identify plant size by determining tree diameter in inches at breast height (DBH") (measured at approximately 54" above the soil line). If measuring tree circumference divide by 3 to obtain the DBH".
- Dilute 10 ml of Alamo in up to 1 liter of water per inch DBH.
- Mix the specified amount of Alamo and water thoroughly in the tank before beginning the injection treatment.

- Reevaluate disease level in trees at 12-month intervals after treatment for the potential need for retreatment with Alamo.
- Preventive applications should be considered 12-36 months after the initial injection.

**\*Cannot be sold in NY, CA or DC**

**Application: microinfusion or macroinfusion tree injection**

Quali-pro Propiconazole

This tree tech microinjectable capsule is the ideal way for homeowners to treat their own trees for Dutch Elm Disease. These single use capsules are the easiest way to get chemicals injected into a tree. No training or specialized equipment is required. Apply when trees are in full leaf and actively growing. Capsules are not to be left unattended. Watch or cover capsules while they are draining into the tree. Capsules are placed one every 5 inches around the circumference of the tree. Only sold in boxes of 25. Treatment is most effective when used in conjunction with cultural practices such as pruning, removal of dead Elm trees, control of bark beetles, etc. Pesticide licenses are not needed to purchase or apply general use pesticides to your own home for no pay. Application for hire requires a commercial applicators license depending on the rules of your state. Cannot be sold in NY.

Application: microinjectable capsule

**TREATMENTS FOR THE ELM BARK BEETLE, WHICH TRANSMITS DED**

**TREE-age**

TREE-age Insecticide can be delivered through the Arborjet Tree IVsystem to deliver this top of the line pesticide straight into the vascular system of the tree. TREE-age has shown to give constant control of insects for two years, reducing the time and money in multiple treatments. Unlike other bark beetle treatments, TREE-age can be applied at any time in the year when leaves are present, and stays in the tree at high volume. In addition to the Mountain Pine Beetle, TREE-age has been shown to be effective against Emerald Ash Borer, Tent Caterpillars, Pine Coneworm, and more. The active ingredient in this product is emamectin benzoate and is applied only through tree injection. The applicator: Arborjet Tree IV kit, is sold separately.

**Application: tree injection**

**\*Note: TREE-age is a Restricted Use Pesticide. Customers must have a valid RUP license on file with SherrillTree before purchases can be complete. TREE-age is only available in certain states.**

**AzaSol**

AzaSol (azadirachtin)- derived from NEEM oil, this organic product has been shown to be effective against bark beetles. It can be applied as an injection, soil drench or spray. NEEM oil has been used as a natural insecticide for many years, and the active ingredient, azadirachtin, has recently been made into an effective and environmentally responsible insecticide with several possible application methods. This product is a favorite among gardeners insisting on safe pesticide control. This is the best and safest option for homeowners treating small plants or trees.

**Cannot be sold into: AL, AR, DE, GA, ID, IA, LA, ME, MS, MT, NM, ND, OK, RI, SC, SD, UT, VT, WY**

**Application: spray, soil injection, soil drench, tree injection**

**TREATMENTS FOR DUTCH ELM DISEASE- FERTILIZERS**

To help trees recuperate from Dutch Elm Disease, a fertilizer treatment is recommended to give the tree the nutrients it needs to heal. Fertilizers can be applied either by injection directly into the tree, with the Arborjet Tree IV system, or the Tree Tech microinjectables. These kind of direct fertilizing treatments tend to have quick, short-lasting results. There are many other varieties of fertilizer that treat the soil, ranging from granular fertilizers, to organic soil amendments. Check out the variety of fertilizer options here.



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**TREE GEAR. TREE PEOPLE.**