



Greyhound™ Insecticide:
Research demonstrates
that one application
reduces Pine Wilt risk
for up to 3 years

There is no cure for Pine Wilt, although a preventative treatment has emerged. One application of ArborSystems Greyhound Insecticide has been shown to provide three-year protection against this devastating disease.

Research Report
One application reduces
Pine Wilt risk for up to 3 years

A test was conducted in a large block planting of Scots pine at Horning State Farm near Plattsmouth, Nebraska, from 2003 to 2005. Many trees within the planting and surrounding areas had died from Pine Wilt in the previous three years. Eleven pairs of symptomless trees were selected for the test; one tree in each pair received one application of Greyhound Insecticide, the other trees were left untreated. At the end of three years, the survival rate of treated trees exceeded that of untreated trees by nearly 300%.

*Research conducted by the Nebraska Forest Service,
University of Nebraska, Lincoln.
See the full report at ArborSystems.com*

Only a licensed arborist can protect
your trees against Pine Wilt.



For more information, visit the ArborSystems website at
ArborSystems.com

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Pine Wilt

A fatal disease
attacking Scots pines
and other pine trees

What is
Pine Wilt

What can
be done
to protect
your trees



PINE WILT

A fatal condition attacking Scots and other Pines



What is Pine Wilt?

- Pine Wilt is a condition that is currently found primarily in Scots pine trees, also called Scotch pine (*Pinus sylvestris*) but has also been observed in Austrian pines. Scots pine is a non-native pine tree most easily identified by the red-hued trunk and peeling bark.

How does Pine Wilt affect pines?

- Once symptoms appear, Pine Wilt typically kills trees quickly—within a few weeks to a few months. Pine needles turn grayish green, then tan, then brown, often affecting scattered branches before spreading to the rest of the tree. In other situations, the entire tree turns brown all at once. Small sections of browning are not unusual on Scots pines. If the browning continues to spread throughout the tree, it probably has Pine Wilt. There is nothing that can be done to save a tree already affected by Pine Wilt.

Where is this problem most prevalent?

- The Pine Wilt problem has expanded across the Central U.S. The effects of Pine Wilt have been discovered as far west as Colorado and as far east as Pennsylvania.

How do trees become affected by Pine Wilt?

- Pine sawyer beetles carry pinewood nematodes, a microscopic worm. When the beetles feed on the soft new growth of Scots pines, the nematodes leave the beetles and enter the tree through feeding wounds. The nematodes feed and rapidly multiply in the resin canals of the tree, destroying the tree's vascular system, resulting in tree death due to severe dehydration.

If a tree has Pine Wilt, what should be done to prevent it from spreading to other trees?

- Dying or dead trees should be removed and the wood chipped to prevent the spread of the nematodes to other trees. Cut trees should not be stored for firewood as beetles may emerge restarting the cycle on healthy trees. Symptomless trees near affected trees can be treated to enhance likelihood of survival.

How can Pine Wilt be prevented?

- A new treatment has been developed and tested which greatly reduces the likelihood of a tree being killed by Pine Wilt. One application of ArborSystems Greyhound™ Insecticide has been shown to provide three-year protection against this devastating disease. (See research report summary on reverse side.)

The Wedgle® Updated!

Direct-Inject™
TREE INJECTION SYSTEM



"We've been using Greyhound Insecticide applied with the Wedgle® Direct-Inject™ system for the last four years, and we've protected hundreds of trees against Pine Wilt. We've injected quite a few trees in high-stress locations, where many neighboring untreated trees have died from Pine Wilt. Overall, our survival rate is about 92%. We're making a lot of customers very happy; when their trees survive while they see Scots Pines all over town brown up and die."

Arborist
Lincoln, Nebraska

**Don't Drill...
Direct-Inject!** Protect your trees from drilling damage.

Greyhound™

Insecticide

Prevention Recommendation

Numerous field tests and research conducted by the Nebraska Forest Service, University of Nebraska-Lincoln have demonstrated that a single application of Greyhound Insecticide can reduce the risk of Pine Wilt infection for up to three years. In the Nebraska study, **the survival rate of treated trees exceeded that of untreated trees by nearly 300%.**

Greyhound Insecticide must be used for preventative control and should be applied prior to any insect activity. Greyhound Insecticide must be applied by a professional arborist using the ArborSystems Wedgle Direct-Inject trunk injection unit and Portle® Injection Tips.

One application provides 3-year protection.



Greyhound also provides effective season-long control of many problematic pests including:

- Lepidoptera insects such as Gypsy Moth, Sphinx Caterpillars, Mimosa Webworm, and Tent Caterpillars
- Elm Leaf Beetles
- Lace Bugs
- Leafminers
- Mites
- Nematodes

ArborSystems™
The No-Drill Injection Solution