

# TREE DEFENDER Solution for Citrus Greening

New Study Shows Long Term Solution to Greening is Unlikely Anytime Soon



A pair of Valencia trees, with a representative control tree on the left treated with conventional pesticide program alone. The tree on the right protected by Tree Defender, one year after Tree Defender was removed. The control tree is already showing signs of HLB with stunted growth and yellowing leaves. The tree previously protected by Tree Defender showing vibrant growth with an approximate 30% increase in height over the control tree.

**Citrus Greening** (also known as Huanglongbing or HLB) has been terrorizing the Florida citrus industry for well over a decade. First reported in 2005, the disease has caused billions of dollars in lost crops and has led to more than 8,000 lost jobs. The 2017 citrus crop saw an almost 70% drop-off compared to 20 years ago and a 14% drop-off from 2016 alone.

Unfortunately for the Florida citrus industry, in a new report by the National Academies of Sciences, Engineering, and Medicine, a single breakthrough discovery for managing citrus greening in the future is unlikely.

“There isn’t going to be a silver-bullet for greening anytime soon, however we must continue a vigorous planting program and keep those trees greening free until bearing age for the industry to remain viable. The extended economic viability of the tree is where the real value comes into play. The long-term solution is going to come from multiple approaches and a combination of tactics,” says Scotty Thompson, co-founder of Tree Defender. “We know that pesticides aren’t working and methods such as C.U.P.S. can be effective but is much more expensive and not practical for all growers. There needs to be a way to protect trees until a cure or long-term solution is discovered.”

The report echoed the same message, calling for growers in the state to find short-term solutions to keep the industry alive. That is where Tree Defender comes in.

**The Tree Defender** is a protective, breathable screen that is placed on young citrus trees for their first two years as they are in a vegetative and growing state. After those two years, the bag is removed, and the trees are HLB and pesticide free, and ready to start producing fruit and crops immediately. If the grower wishes to continue protecting the tree into the mature years, then they simply purchase a larger Tree Defender.



Psyllids on the screen of a Tree Defender

The committee that wrote the report called for an approach that prioritizes research as well as assists in distributing resources that will further research to help effectively manage and stop the disease. The Citrus Research and Development Foundation (CRDF), a \$124 million state citrus-industry initiative, has invested nearly 90% of its funds in HLB research and asked the committee to review its research portfolio and determine if its efforts have followed recommendations outlined in the original report that called for the organization’s creation.

The committee did find the CRDF adhered to several of the recommendations outlined from the initial report, and, along with several other organizations, has significantly advanced our knowledge of the disease. However, HLB remains a serious threat to the state’s citrus industry, having now progressed from an acute to a chronic disease throughout the state.

The report notes that there are still significant obstacles in the way of discovering a breakthrough cure for greening. The inability to culture bacteria in the laboratory, the lack of advanced diagnostics to help with early disease detection, and no standardized approach to compare results across various studies are all issues preventing a breakthrough for the disease.

“Long-term HLB solutions would likely utilize new technology, such as gene modification and gene editing, focusing on targets that mediate molecular interactions among plant, bacteria, and the vector,” the committee said.

**While long-term solutions** aren’t yet on the horizon, the Tree Defender provides an immediate solution to citrus greening by preventing psyllids from infecting citrus trees as they are maturing. Having been in the field now for over three years, Tree Defender can still confidently say that no psyllid has yet to be found on any tree being covered by their screens.



Valencia tree previously protected by Tree Defender still showing characteristic larger leaf growth one year after the cover was removed, compared to the tree next to it - treated with a conventional pesticide program.

Keeping trees greening-free and delaying the infection risk as they mature allows them to stay healthy and immediately start producing once they reach their production stage. This means cutting costs for pesticides as well as getting a greater return on investment as there will be more healthy trees producing more citrus.

“One critical need we fill is that Tree Defender is just as economical for a small grower to utilize as it would be for one of the largest growers in the state,” says Thompson.

Not only can Tree Defender provide a quick solution for greening, it’s versatility makes it a perfect and easy solution for other common problems as well. It protects trees from psyllids, prevents damage from deer, provides UV protection to the leaves, helps to prevent canker, and the bags are durable and can be used for multiple years on multiple trees.



For details about product orders, availability, and cost, call (863) 439-2877 or visit [threetreedefender.com](http://threetreedefender.com) for more information.



Trees previously protected by Tree Defender consistently show one uniform bloom as compared to inconsistent multiple stage blooms with trees already infected with HLB.



**The Tree Defender**, with its patent-pending design, is available in a 4-foot, 5-foot, 7-foot all the way up to a 12-foot bag. These larger bags are designed for mature trees. They have four sides with two opposing zippered sides which allows for harvesting activities without removing the Tree Defender. Each screen has a life expectancy of up to eight years and is also ideal for protecting various other small trees and plants such as tomatoes or peppers.

The Tree Defender is currently selling directly to growers and individual bags will be available for resale within the next few months for casual and backyard growers as well.



Scott Thompson & Tommy Thayer