



The TreeSteamer© invented by ScoringAg, Inc. beats HLB Citrus Greening

The **TreeSteamer©** a new invention from ScoringAg, a company that leads the way in agricultural sanitation equipment, is a process system that prevents the worldwide Citrus Industry from Greening Disease, also known as Huanglongbing (HLB), or yellow dragon disease, the most devastating disease of citrus.

The Greening disease is transmitted by insects known as psyllids. that affects all citrus cultivars and causes rapid tree decline. It has seriously affected citrus production around the world and started in Asia (the native home of citrus), Africa, the Indian subcontinent, the Arabian Peninsula, and a number of islands in the Indian Ocean, and was recently discovered in Brazil (2004) and Florida (2005).

All the efforts to manage the Greening Disease were not effective. In order for psyllid control measures to be 100% effective at eliminating the chance of disease spread, the psyllids (jumping plant lice) population would need to be reduced to zero. Such a scenario is simply not possible.

Research made by USDA and University of Florida showed great success by steaming the trees to kill the disease.

ScoringAg, Inc. invented a commercial TreeSteamer© that can handle 1-3 trees per minute.

How it works:

The TreeSteamer© by ScoringAg is the combination of separate portable components: the Sioux Steam Generator and the TreeSteamer© tunnel system work together to kill citrus greening on the above ground portion of the tree. These components work together to perform the task of heating the trunk, limbs and leaves and or fruit to a level that kills the greening disease and any other unknown pathogens that hinder citrus fruit production.

Since these are separate components, the option to buy one or more different size tunnels and whatever combinations are affordable or profitable for the size of groves and trees is possible.

In the steam cycle, the Sioux boiler raises the temperature to facilitate above ground tree sterilization. The unit provides to the steam tunnel controlled steam flow for the kill down time and the steam temperature to kill greening disease above the soil line. Travel speed and temperature does is adjusted to treat 1-3 trees per minute.

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TreeSteamer© Models by ScoringAg

**The equipment will be manufactured in three types of TreeSteamer© ;
*Self-propelled tracked, Pull Type, and a 3 Point tractor mounted unit.***

The three types of TreeSteamer© units will be continuous flow or batch operated with an optional tree hedger on the self-propelled tracked model.

Specification for Pull-type TreeSteamer©

- 20 hp Sioux steam boiler system with automatic firing and safety controls
- 120-220V single phase 6500 W Diesel Generator Quick couple hydraulic tool carrier frame and hydraulic leveling cylinders for movement in groves
- 2-2" threaded steam discharge valves & 20' hoses on 36 ft. 6" distribution pipe
- Flotation tires and flex-frame for easy movement around canals and ditches
- Steam tunnel is 36x14x10 feet, other sizes available with 280 F degree temp cover and steam pipe frame
- Computer GPS weather station for on the go travel speed adjustments for field temperature variations
- Needs a 4-wheel drive 70 hp grove tractor with 4 plus Hydraulic outlets

Operating Specification Pull-type TreeSteamer©

- Fuel is No. 2 Low Sulfur diesel with onboard filter and pressure pump system
- Stainless steel Vented 10" chimney connection
- Continuous steam at 4.5 lbs. (85° water to 300° steam), using 70 gallon potable water per hr.
- 135 gallon fuel tank, 6 ¼ + gallon per hour use depending on outside temperatures
- High-lift mobile frame with flex hydraulic leveling system for boiler and steam tunnel
- Four live camera systems to keep operator informed of steaming operations
- On board 110-220 V continuous run 30 amps Diesel generator for boiler plant operations and instruments
- All fittings, tubing and hoses required for steam delivery and shutoff
- 400 gal. potable water supply, pumps – 45 PSI, ¾" hose and 20 GPM minimum
- "Clearwave" water conditioning unit for reduced boiler lime build up
- Gauges for all controls, fluid levels and steam temperature/pressures monitoring
- Start up automatic water pump system built into the system before startup
- Rotating Lift design for steam tunnel to work in different size trees or around hills
- Adjustable guide wheel system for steam tunnel and float pipe distribution system
- One year warranty on all parts (freezing of unit excluded)

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