

Fact Sheet



Windbreaks for Citrus Canker Control

Silk Oak (Grevillea robusta) a Choice for Producers

October 2006

Overview

Citrus canker, caused by the bacterium *Xanthomonas axonopodis* pv. *citri*, is a leaf, fruit, and stem spotting disease that affects numerous species, cultivars, and hybrids of citrus and citrus relatives.



Citrus producers in Florida are being advised to use a combination of resistant varieties, chemical sprays, and windbreaks to manage the impact of the disease.

Why Windbreaks?



Silk oak trees (back) planted in wind - break in Brazil for citrus canker control.

The vast majority of the infection occurs by wind-blown rains. Winds of 18-20 mph are needed to actually force bacteria into

the stomates on leaves and fruit. Work in Argentina has found that the number of canker lesions was ten times greater on the side of the tree exposed to the prevailing winds than on the protected side of the same tree. In tests in nursery situations, artificial windbreaks greatly diminished the distance of spread of canker down the nursery row and reduced disease to only a few scattered lesions. For this reason, the citrus canker research community in Florida believes that windbreaks are the most critical component for management of the disease.

Plants for Windbreaks

Trees and shrubs used in windbreak plantings for citrus canker control need to be easy establish, fast growing, low maintenance, etc. A list of the plant species recommended for windbreak

planting can be found on the back of this fact sheet.

Silk oak (*Grevillea robusta*) is new to this list. Like eucalyptus, this is a non-native, fast-growing species that is best suited for coastal flatwoods. This species is used extensively in Brazil and less so in other parts of the world where citrus is grown. This evergreen tree is suited to most soils except very calcareous or chronically wet conditions. It can be used by itself in single rows. BUT, it is susceptible to mushroom root rot if grown in wet sites and the trees become brittle as they age. Branch loss can be expected from wind damage. Also, the species is not very cold hardy. Thus, until further experience is gained in Florida, *Grevillea* is only recommended for the warmer, coastal areas of the citrus industry.

To assist Florida citrus producers, the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) in Florida now includes the planting of windbreaks for citrus canker control as a conservation practice eligible for cost share payments under the Environmental Quality Incentives Program (EQIP).

How to Apply for Assistance

More windbreak cost share information will be available soon from your local NRCS office or <http://www.fl.nrcs.usda.gov/programs/eqip/flequip>. The FY2007 sign up period in Florida ends on **December 15, 2006**.

For additional information contact your local USDA-NRCS Service Center office at <http://offices.sc.egov.usda.gov/locator/app> or Jeffrey Woods, Assistant State Conservationist for Programs, Jeffrey.Woods@fl.usda.gov, 352-338-9515.

Plant species for Citrus Windbreaks ¹					
Common name	Scientific name	For use in citrus production area	Height at 2 yr	Mature height	In row spacing
Trees and other					
Slash pine	<i>Pinus elliottii</i>	Flatwoods	8-10 ft	80 ft	3-6 ft
Sand pine	<i>Pinus clausa</i>	Ridge	6 ft	70 ft	3-6 ft
Eucalyptus	<i>Eucalyptus grandis</i>	Soils not suited for pine and ridge soils with irrigation	15-20 ft	90 ft	3-6 ft
Silk oak	<i>Grevillea robusta</i>	Coastal flatwoods	10 ft	40 ft	6 ft
Red cedar	<i>Juniperus virginiana</i> or <i>J. silicola</i>	Ridge and flatwoods	6 ft	40 ft	4-6 ft
Bamboo	<i>Bambusa</i> spp. (non running species only)	Ridge and flatwoods	20-30 ft	40-60 ft	4-6 ft
Shrubs					
Walter's viburnum	<i>Viburnum obovatum</i>	Ridge and flatwoods	6-10 ft	20 ft	6 ft
Sweet viburnum	<i>Viburnum odoratissimum</i>	Ridge and flatwoods	6-10 ft	20 ft	6 ft
Saw palmetto	<i>Serenoa repens</i>	Ridge and flatwoods	4 ft	6 ft	3 ft
Crape myrtle	<i>Lagerstroemia indica</i>	Flatwoods	10 ft	30 ft	3-6 ft
Wax myrtle	<i>Myrica cerifera</i>	Ridge and flatwoods	6-10 ft	10-15 ft	6 ft
Simpson's stopper	<i>Myrcianthes fragrans</i>	Ridge and flatwoods	6 ft	20-30 ft	3-5 ft

¹More information on these plants can be found at <http://www.crec.ifas.ufl.edu/extension/windbreaks/species.htm>.