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SEFFNER — Florida's state tree is dying, and there's no cure.

A disease that's killing sabal palms was reported in Hillsborough County on Thursday, but University of Florida researchers who used DNA testing to confirm the deadly phytoplasma don't know how it is spread or how to stop it.

"It's a new disease, and there are no easy answers," said Hillsborough County forest extension agent Rob Northrop.

What they do know: The tall, slender trees that are the source of "swamp cabbage" — the edible hearts of palm — are turning brown and dying.

The disease has been confirmed in sabal palms along Brandon Parkway, in Ruskin's E.G. Simmons Park and along U.S. 41 south of the Alafia River, Northrop said. It was found in Manatee County two weeks ago.

It's hard to determine how widespread the disease is because there are no field tests, and it can't be diagnosed by simply looking at the trees, Northrop said. Confirming the disease requires expensive DNA testing.

The disease is probably caused by the same phytoplasma — a bacterium without a cell wall — that's killing four other palm species: the Canary Island date palm, the edible date palm, the wild date palm and the queen palm, UF researchers said.

Scientists call it the Texas Phoenix palm decline because it was first found in Texas in the 1970s. It was confirmed in Florida about two years ago and has since spread to five west-central Florida counties.

Along Brandon Parkway, two types of palms — the Canary Island date palm and the sabal palm — have the disease, Northrop said. Hillsborough County spent \$2.5 million landscaping the 3-mile road in 2003, and those palms are only about 100 yards from newly planted ones on Lumsden Road.

That's too close, if researchers' theories are right. They suspect the phytoplasma is carried by plant-hopping insects that feed on the trees' nutrient-carrying tissue.

Because each tree can cost thousands of dollars, Northrop suggests that people stop planting palms until more is known about the disease.

For now, homeowners who find withering palms in their yard should not immediately remove the tree, Northrop said. Browning leaves and fallen fruit could be caused by other problems, such as nutrient deficiency or over-trimming. Instead, disinfect pruning shears between trimming each palm and consider hiring an arborist to inject an antibiotic.

The antibiotic, called TreeSaver, is inexpensive, but Northrop suggests hiring an arborist to inject it correctly. That could cost a couple hundred dollars and should be done three to four times a year.

The antibiotic isn't practical on a large scale, said Monica Elliott, a UF plant pathology professor based in Fort Lauderdale, so there's no real solution yet for stopping the disease. Meanwhile, palms that grow in the wild are also being affected, Northrop said. Sabal palms make up about 3 percent of the bay area's forest, he said.

"The loss of these palms could change the interaction in the forest, the soil, the water, the animals, not to mention the landscape value of the palms in cities like Tampa," he said.

The next step for researchers is to sequence the phytoplasma's DNA to make sure it's the same as that of the Texas Phoenix palm decline. Then they hope to determine which insect is carrying it and how to prevent spreading.

That will cost a lot of money, Elliott said, and the problem comes at a bad time. The budget of UF's Institute of Food and Agricultural Sciences was recently slashed as the university and the Legislature faced their own spending cuts.

Researchers have been relying on grants, many of them federal, but that doesn't bode well for palm tree research. Because most palms are found in Florida, it's hard to get substantial federal money, Elliott said.

"Our biggest enemy is that it's a local problem," she said.

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FAST FACTS

What's killing the palms: Phytoplasma — a bacterium without a cell wall. It's probably the Texas

Phoenix palm decline, known to scientists as 16SrIV subgroup D.

How it spreads: Scientists aren't sure, but they suspect plant-hopping bugs that suck up nutrients containing the phytoplasma.

Symptoms: They include dead lower fronds, the death of the spear leaf — the newest frond in the canopy — and falling fruit. Sabal palm fronds turn bronze or reddish-brown, then gray-brown.

Spotting an infected tree: The symptoms are a good clue, but nutrient deficiencies or over-trimming also might be to blame. DNA testing gives the only sure answer.

What to do with an infected tree: Remove it immediately, although the extension service suggests not simply pulling out a tree at the first sign of brown fronds.

Prevention: It's possible on a small scale. An antibiotic called TreeSaver can be bought at www.palmtreesaver.com. An injection costs \$1 to \$4 and is recommended three to four times a year. It's best to hire an arborist to inject it, which could cost several hundred dollars.

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