Professor aims to create hybrid Christmas tree

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ATHENS — Most Christmas trees that adorn people’s homes this time of year are grown and harvested elsewhere due to Georgia’s hot summers and humid climate.

A University of Georgia horticulturist is hoping to change that by popularizing a hybrid that combines Fraser firs with their Japanese cousins, the Momi firs.

Mark Czarnota, a horticulturist and associate professor at the University of Georgia College of Agricultural and Environmental Sciences, hopes to combine the hardy Momi fir rootstock and Fraser scion, or shoot, into a tree that will grow throughout much of Georgia and the Southeast.

“Here in the South, it’s difficult to grow firs because of the weather and their susceptibility to fungus,” said Czarnota. “You may plant 100 and only get 10 trees that grow to maturity. Firs are the most popular tree on the East Coast.”

Czarnota said the Momi fir was released to tree growers about 20 years ago.

“When it comes to Fraser firs, you plant them in the ground (in Georgia), and they die … but Momi firs do really well in the South,” he said.

Most Christmas trees, specifically Fraser firs, are shipped into Georgia from North Carolina or other locations, according to Czarnota.

“So we are trying to help out the growers here in the state. … This will be a great step in the right direction for Christmas tree farmers in Georgia,” said Czarnota. “I don’t expect it to take over the market, but it would be a great addition.

“A lot of work needs to be done in selecting good Momi grafting stock for desirable uniformity. It’s a lifetime project, and great potential exists in trying to cross Momi fir with other firs.”

Georgia’s hot summers and mild winters make it difficult for farmers to grow Fraser firs in most of the state.

While they will grow in North Georgia, the downside is the trees can be affected by the root fungus Phytophthora infestans. If not treated, it can kill infected plants.

Fir trees also produce new growth very early in spring, which makes them susceptible to the freezing temperatures that sometimes pop up in late March and damage Georgia crops.

“When new shoots start to grow in early spring,” said Czarnota, “they are often severely damaged or killed by the below-32-degree temperatures that we often have during the spring here in Georgia and much of the Southeast.”

Using a $30,000 U.S. Department of Agriculture grant, Czarnota is looking to find other alternatives for Georgia Christmas tree farmers. Working with growers in Lovejoy and Terrytown, he grafts Fraser firs onto containerized Momi fir rootstock on the UGA campus in Griffin.

One of Czarnota’s collaborators, 84-year-old Earl Worthington, a Christmas tree farmer in Lovejoy, was one of the first growers to try to grow firs in the Georgia Piedmont region. He hopes someday to grow enough Fraser firs to avoid buying from growers in North Carolina.

He has been grafting Fraser firs onto Momi firs for 17 years, according to Czarnota. In the beginning, it took 10 years for him to grow an 9-foot tree.

“I can now produce a 5- to 6-foot tree in five to six years,” said Worthington. “Some (trees) turn out very yellow, some very stiff, some are green all year, some flush early, and some flush late. Grafting trees is definitely a project for someone with patience.”

The biggest problem he now faces with grafting efforts is inconsistencies.

Momi firs are more tolerant of the Phytophthora fungus and of Georgia’s weather, but they aren’t perfect.