

Article published Nov 25, 2008

### **Hope for stately chestnut**

FARMINGTON — The seedlings of a cross-pollinated American chestnut tree have surpassed expectations as part of a project to make the once productive tree more resistant to a fungus that laid waste to them in the country.

In July 2007, the American Chestnut Foundation introduced pollen from a chestnut tree in Tennessee — one resistant to the fungus known as Asian blight — to cross-pollinate a hardy chestnut tree discovered on the 125-acre property of Bill and Nancy Yates, which is located along Chestnut Hill Road.

Bill Yates, 68, said he's glad to hear the project is going well and that some of the trees survived. He added the 40-foot-tall chestnut tree that donated the nuts did not suffer from the experience, unlike other trees on his property along Chestnut Hill Road.

"The tree lived and it had a good crop," Yates said, adding most of his chestnut trees "grow about a year and just die."

Nonetheless, he still has a few chestnut trees growing on his property and has high hopes the experiment is successful, but understands the project will take time to bear results.

"Hopefully, we'll beat this blight," Yates said, fondly remembering 60 years ago when Chestnut Hill Road was lined with the broad American chestnuts and homes were built from the rot-free wood before Asian blight struck many down.

"A lot of old barns were made of this and they are still as strong as they were when they were built," Yates said.

The ACF hopes to repopulate the eastern seaboard with American chestnut trees, which were decimated by Asian blight in the early 20th century.

Seven trees were cross-pollinated in this phase, the fourth of six — drawing two from New Hampshire and five from Vermont — which provides "a fair amount to plant," according to Kendra Gurney, ACS's New England Science Coordinator.

She said the ACF will look at another American chestnut tree in Exeter for another potential source for the project.

The tree from Farmington produced 154 viable seeds and 100 of them were planted in Shieling State Forest in Peterborough in May alongside a 19-tree control group made of American, Chinese and a hybrid American-Chinese chestnut trees. As of Sept. 15, 102 of the 119 total trees were still alive, including 87 from Farmington, according to Gurney.

"This is actually better than expected," Gurney said.

This is the fourth generation in the tree breeding program. The most resistant trees from this generation will then be selected for another round of cross pollination, which should be the second to last. The ACS hopes its efforts will lead to a blight-resistant American chestnut suitable for reintroduction to New Hampshire's forests, according to an ACS release.

After two more rounds of breeding trees, the ACS hopes to breed a tree that is 94 percent American chestnut and resistant to Asian blight.

Gurney said the remaining 54 seedlings from Farmington were sent to a nursery in Boscawen, which can be used to keep the numbers to a healthy level for the project. She added more seedlings may be planted in the spring.

Eventually, Asian blight will be introduced to the trees in about five to seven years, although some of the trees will probably be naturally infected by the fungus, which grows beneath the bark and eventually blocks the flow of water and nutrients through the tree, Gurney said.

"The blight can attack (trees) at any time. It's opportunistic, but requires an open wound," Gurney said, adding a broken limb is a common site of infection.

Blight is spread on the wind and by small animals such as birds and rodents. Oak trees, which are not affected by the fungus, can act as carriers, but it is also found on chestnut root sprouts, which rarely get large enough to flower and reproduce before they are killed by blight, according to the ACS.