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New strain of blight-resistant chestnuts takes root



Rick Steelhammer

Michael Singleton, a Glenville State College student, plants a blight-resistant American chestnut seedling in a clearing on MeadWestvaco land near Charmco.

By [Rick Steelhammer](#)

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To learn more about the effort to restore American chestnuts to the forests of the eastern United States, visit the American Chestnut Foundation's website at www.acf.org.

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Katy McCune, regional science coordinator for the American Chestnut Foundation, and Jay Engle of MeadWestvaco, left, check lot numbers on bags of American chestnut seedlings as they are offloaded for planting.

CHARMCO, W.Va. -- A plot of 650 seedlings planted on a Greenbrier County hillside on MeadWestvaco land last weekend could become a breeding ground for the restoration of the American chestnut tree.

In the early 20th century, American chestnuts made up about 25 percent of the hardwood mix from Maine to Georgia and west to the Ohio Valley, including all of West Virginia. But a fungus-spread blight that arrived on chestnut nursery stock imported from Asia quickly spread across the stately tree's range, killing virtually every mature American chestnut by 1950.

"Genetic scientists believe these trees--the most advanced hybrids ever developed-- are blight resistant," Katy McCune, regional science coordinator for the American Chestnut Foundation, told volunteers before planting the young chestnuts on Saturday. "It will be great to come back here later and see all these chestnuts leafed out and growing."

The trees planted in Greenbrier County are B3-F3 hybrids, developed by crossbreeding American chestnuts with blight-resistant Chinese chestnut strains to produce a tree that is 15/16ths American.

"These trees are the result of more than 30 years of scientific research for blight resistance and American chestnut growth characteristics," said Jimmy Jenkins, a professional forester from Braxton County and president of the West Virginia Chapter of the American Chestnut Foundation. "We're hoping to restore this magnificent giant - the redwood of the east - to its former status in the forest."

But it will take five to 10 years of growing time in the newly planted "progeny test" research plot "before we start getting initial results on just how resistant they are," McCune said.

If the trees survive eight years to nut-bearing stage and continue to resist the blight, "this could be the place where we collect pollen and seed to help the chestnut make a comeback throughout its range," Jenkins said.

"This area was the heart of chestnut country," said Jay Engle, operations support analyst for MeadWestvaco, as he looked over the recently logged oak stand where Saturday's planting took place. The blight didn't kill the chestnut's root system, so American chestnut sprouts can be found on this site. "That was one of the criteria for planting the trees here," Engle said.

MeadWestvaco contractors cleared slash from the site, and used a track hoe to prepare the ground for planting. A small army of volunteers dug holes, hauled and planted seedlings, installed metal identification tags, and recorded planting data.

Saturday's work crew included 15 students and faculty from Glenville State College's land resources and forestry departments, members of the state chapter of the American Chestnut Foundation, MeadWestvaco employees, state Division of Forestry personnel and members of the Sustainable Forestry Initiative, which provided funding for the project.

The health and growth rates of the newly planted trees will be periodically monitored. Engle said a small electric fence would be installed at the site to discourage deer from browsing on the young chestnut trees.

McCune said the Greenbrier County test plot is one of about 16 that will be established in the region this year, involving about 3,000 of the advanced American chestnut hybrids.

"It would be great to restore this tree to the forest ecosystem," said Engle. "Since the American chestnut blossoms later than other species, it is more resistant to frost and is a more reliable producer of nuts, which have a higher food content than nuts from other trees, making it valuable to wildlife."

"Farmers used to gather the nuts to sell them or feed them to their hogs," said Jenkins.

Straight-grained, rot-resistant chestnut lumber, once a mainstay in home construction and

furniture production, would also be a valuable addition to the region's wood products industry.

An estimated 4 billion American chestnut trees were lost to chestnut blight, with only a few individual trees in scattered locations surviving to maturity.

Engle said one American chestnut on MeadWestvaco land in West Virginia grew to 65 feet before it succumbed to the blight. While numerous chestnut sprouts and young trees can be found throughout the Appalachians, virtually all develop blight-related cankers before reaching maturity and die.

The blight is spread through the air via fungal spores that enter trees through injuries or cracks in the bark.

The American Chestnut Foundation has been back-breeding American chestnuts with their blight-resistant Chinese cousins since 1983, said Ed Grafton, a retired Glenville State Forestry professor who pitched in during Saturday's chestnut planting.

"Thanks to a dedicated group of volunteers, we've reached the point where we may finally have a blight-resistant tree," he said.

Glenville State maintains a chestnut orchard containing earlier generations of hybrids, as well as some of the new B3-F3 trees.

The American Chestnut Foundation's planting of 3,000 B3-F3 American chestnut seedlings this year is made possible by a grant from the Sustainable Forestry Initiative. Engle said MeadWestvaco would offer another test plot next year, probably at site with a higher elevation.

"We now have a blight resistant tree in the ground," said Jenkins, "but long-term testing and evaluation will help improve the resilience of the American chestnut for the future."

The West Virginia chapter of the American Chestnut Foundation hosted Saturday's planting in cooperation with MeadWestvaco and the Sustainable Forestry Initiative. Jenkins said anyone interested in joining the chapter should contact him at 304-765-2632 or wind...@hughes.net, or chapter vice president Brian Perkins at brian.perk...@glenville.edu.

Foundation member Ken Stowers of Nettie, a retired Bureau of Land Management forester, said he remembers cutting wood from old chestnut snags for use as firewood on his family's Nicholas County farm.

"We have some rail fences made from chestnut that are still standing," he said. "In some parts of the state, chestnuts made up 40 percent of the forest. It would be great if my grandchildren could see that forest return."

Reach Rick Steelhammer at rsteelham...@wvgazette.com or 304-348-5169.