

MINING/CONSERVATION: Forestry initiative plants threatened chestnuts on stripped land (Thursday, April 24, 2008)

Katie Howell, *Land Letter* reporter

ANDREW, W.Va. -- Ninety West Virginia seventh-graders -- nearly three-fourths of whose parents work in the coal industry -- last Friday helped state and federal regulators and mining officials in a two-pronged approach to environmental restoration by planting American chestnut trees, a threatened species, at an abandoned strip mining site.

Massey Energy's Black Castle coal mine hosted Madison Middle School students for an Arbor Day event -- one of 10 being held throughout Appalachia this year -- to plant trees on mountains scraped open and leveled by strip-mining.

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Students and teachers from Madison Middle School, ARRI officials and Massey Energy representatives watch a blast set off at Massey's Black Castle coal strip mine in Boone County, W.Va., before planting American chestnut and red oak trees on a reclaimed portion of the 7,500-acre mine. Photo by Katie Howell.

"Reforestation is a critical part of mining," said Don Blankenship, Massey Energy's chairman. "It plays a key role in the balance between mining and protecting the

environment."

The tree-planting approach is new to coal mine restoration. And even newer is the planting of American chestnuts at the abandoned strip mining sites.

For the past 30 years, federal regulators required mine operators to compact the pulverized rock-rich soil and plant grass to prevent erosion, reduce runoff and lessen the threat of flooding in the lush valleys below abandoned strip mines. But foresters and regulators were disappointed that the restoration efforts did not produce the biologically diverse forests that had been cut down to scrape out the coal.

"Grass is great at holding the soil down," said Ben Owens, press officer for the U.S. Interior Department's Office of Surface Mining Reclamation and Enforcement. "But the grass was competing with the trees for nutrients."

So four years ago, a group of scientists, foresters and state and federal regulators formed the Appalachian Regional Reforestation Initiative (ARRI) to encourage strip-mine operators to take a completely opposite approach -- break up the soil instead of compacting it and plant native hardwood trees instead of grass.

In the past four years, ARRI has planted 10 million trees at mine sites throughout Appalachia -- 3 million in West Virginia alone. These native hardwood trees are intended to attract other plants and animals with the objective that the forest can rebuild itself by natural means, Owens said.

"Part of the energy and environmental balance in this country is to -- after extraction -- restore and bring mines back to the way they were before," said Foster Wade, deputy assistant secretary for land and minerals management for the Interior Department. "One great step toward achieving that is being able to plant chestnuts."

Fighting the blight

American chestnuts were once known as the "redwoods of the East" but have struggled in this country for nearly all of the past century. Once blanketing the entire eastern United States from Maine to Mississippi and towering 100 feet tall, the tree was extraordinarily useful. The nut was a cash crop. The tall, straight trees made excellent timber for buildings and furniture, and it provided food for livestock and wildlife. But the species came to the brink of extinction when a blight nearly wiped out the population in the early 20th century.

Meghan Jordan, director of communications at the American Chestnut Foundation (ACF), said 500 or 600 American chestnuts exist in the wild today.

Jordan's organization works to protect the surviving trees, plant new ones and develop new blight-resistant backcrosses or hybrids of the American chestnut bred with other chestnut species.

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Students plant American chestnut seeds and red oak seedlings on a 3-acre reclaimed portion of the Boone County, W.Va., Black Castle coal strip mine site. The mine received an award for good forestry practices on the nearly 2,000 acres of mined land the company has returned to forestland. Photo by Katie Howell.

ACF joined with ARRI last year to incorporate the chestnut plantings at mine restoration sites. This year, ARRI and ACF will plant nearly 4,000 American chestnut seeds and seedlings at strip mines throughout Appalachia, including 800 in West Virginia and 100 at the Black Castle site.

Forestry experts expect the trees to be able to better withstand the blight in the sterile post-mine soil.

"We're trying to establish these chestnuts on mine soil because it's sterile and chances are higher that some could survive because they're not surrounded by other trees," said Brad Edwards with the Morgantown, W.Va., field office of the federal Office of Surface Mining and a spokesman for ARRI. "These are proxies, so we'll see how well they do in mine soil."

The blight is essentially a fungus that travels through the ground or by wind, water or animals and infects American chestnuts. It most likely was introduced in this country by a carrier Asian chestnut that was resistant to it.

In addition to the chestnuts, the participants also planted 100 red oak seedlings on

a 3-acre site within the 7,500-acre active mine that produces 4 million tons of coal annually. The company said it has reclaimed -- meaning that it followed permit instructions to restore the area after mining by compacting and planting grass or aerating and planting trees -- 2,000 additional acres in completed areas throughout the mine. ARRI presented Massey with an award for excellence in reforestation at the Black Castle mine during the Arbor Day event.

Although planting trees at reclaimed mine sites is a relatively new concept, forestry experts are confident it will be successful -- and in more ways than just helping restore the environment or supporting the American chestnut.

"ARRI helps the future economy of the area. Timber is a huge industry, and [tree planting] helps make sure the lands are productive," said Scott Eggerud, an ARRI team leader and forester with the West Virginia Department of Environmental Protection's Division of Mining and Reclamation.

A new generation

Tyler Rogers, 13, manned the shovel during the Arbor Day event while helping a group of his classmates plant their second tree of the afternoon -- a red oak seedling.

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Madison Middle School seventh graders [l to r] Cory Leger, 13, Zac Elswick, 13, Tyler Dillon, 12, and Tyler Rogers, 12, place a plastic tube around a chestnut seed they have just planted at Massey Energy's Black Castle coal strip mine in Boone County, W. Va. The tube will protect the seed from scavenging animals as it germinates. Photo by Katie Howell.

"This is awesome," Rogers said. "It feels good to give back to the environment after all it's given us."

Later, he helped classmates Tyler Dillon, 12, Zac Elswick, 13, and Cory Leger, 13, plant an American chestnut seed. The boys were careful to mark where they buried it with a stake and to surround the seed with a protective tree tube.

"So the squirrels can't eat it," Elswick said.

As his friends picked up their tools to move toward the next planting spot, Dillon looked back and said, "I can't wait to see what it looks like in a couple of years."

Dillon's sentiment is exactly what ARRI and the mining operators hope to instill among the students participating in the Arbor Day events.

"The American chestnut is a part of our American heritage that has been lost," said Wade with the Interior Department. "My generation grew up without the chestnut, but this generation will be able to enjoy it -- and say they helped bring it back."

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