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Poplar Trees Being Used in Biofuel Study

KYLE ODEGARD

JEFFERSON OR — A farm just outside of town on Densmore Road has a rather unusual crop for the area. There are 80 acres of poplar hybrids — more than 115,000 trees that can thrive in marginal soils and grow 30 feet in three years.

“Where the soil is the best here, the trees are pushing 35 to 40 feet in three years,” said Rick Stonex, operations manager for GreenWood Resources, an investment and management firm that specializes in forestry assets.

Many of those trees are currently being harvested, and the acreage is part of a federally-funded research project regarding biofuels.

“We’re trying to find the varieties that grow the best and convert the most sugars. ... Anytime you’re doing biofuel, your goal is to capture sugar,” said Noelle Hart, a Washington State University Extension coordinator for the study.

The poplar trees can be chipped and then converted into gasoline, diesel, jet fuel and ethanol, as well as other chemicals. “Our focus is more on aviation fuel,” said Brian Stanton, chief science officer for GreenWood Resources.

The Advanced Hardwood Biofuels Northwest study includes several academic and industry partners such as Oregon State University, and has four sites throughout the Northwest and northern California.

Cost of production is another critical factor of the research project.

Low gas and oil prices, however, have hampered the economic viability of using poplar trees for biofuel, Stanton said.

The project was formulated by the U.S. Department of Agriculture during the recession, when fossil fuel prices were considerably higher, Stanton said.

Oil is currently around \$50 a barrel, he said, and adding that it would need to be double that for poplar biofuel to take off.

“We’re not competitive today, but we believe we will be one day,” Stanton said. And biofuel would be a hedge against stratospheric gas and oil prices.

If poplar biofuel proves feasible, Hart said, an industry could spring up and create jobs.

Get news headlines sent daily to your inbox Email Sign Up! Jefferson was chosen as a research site partly because



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it's typical of the Willamette Valley, which, because of its population base, would be a logical place to produce and distribute biofuel.

The poplars at the Jefferson site were planted in the spring of 2012, then harvested in 2013 after two growing seasons.

The trees there are managed as a perennial row crop, and they can be harvested every two to three years. Multiple shoots sprout from the stumps for future harvests. There is no irrigation at the Jefferson site.

"You don't have to replant it for six, seven cycles, so that's 20 years," said Stonex, a 1980 graduate of OSU.

One acre of poplar trees can produce roughly 2,000 gallons of ethanol every three years, he added.

Oregon State University is participating in the project, in part, by educating students about the potential of poplar trees and helping middle and high school science teachers with lesson plans about biofuel. But graduate students also are helping with research at the site and a forestry professor is developing the science to keep the hybrids from flowering.

The latter will help the trees push more energy into growth and also keep the hybrids from cross-pollinating with native poplar trees, Stanton said.

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