

Paper industry tests genetically altered trees

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This Nov. 11, 2008 photo released by ArborGen shows a field of genetically engineered eucalyptus trees in Sebring, Fla. South Carolina-based ArborGen has received federal approval to plant about 250,000 more trees in locations around the South for use by International Paper, MeadWestvaco and Rubicon LTD. (AP Photo/ArborGen) NO SALES

The commercial paper industry's plans to plant forests of genetically altered eucalyptus trees in seven Southern states has generated more cries from critics worried that such a large introduction of a bioengineered nonnative plant could throw natural ecosystems out of whack.

ArborGen, a biotechnology venture affiliated with three large paper companies, got U.S. Department of [Agriculture](#) approval last month for field trials involving as many as 250,000 trees planted at 29 sites during the next few years. Much smaller lots of the genetically altered trees

have been growing in some of the states for years.

Australian eucalyptus trees grow faster than native hardwoods and produce high-quality pulp perfect for paper production, but thus far, they have been able to thrive only in very warm climates. South Carolina-based ArborGen genetically altered the trees to withstand freezing temperatures, and the idea with the test forests is to see how far north they can now be grown.

The test sites will cover a total of about 300 acres in Florida, South Carolina, Texas, Alabama, Mississippi, Georgia and Louisiana.

While genetically engineered crops such as corn and soybeans have become common, ArborGen's experiment marks the first large planting of designer trees in the United States. The company says plantations of hearty, faster-growing eucalyptus could produce more timber in a smaller area and allow conservation of natural forests.

But critics say that despite the USDA's assurance that the trees pose no [environmental threat](#), not enough is known about their effect on natural surroundings.

"We have many reservations about it," said Neil J. Carman, a biologist who serves on the Sierra Club's [genetic engineering](#) committee. "We don't think the scientific evidence is in yet that says this is a good idea."

Anne Petermann, executive director of the activist group Global Justice Ecology Project, said eucalyptus trees are invasive, require vast amounts of water that could reduce groundwater levels, and increase the wildfire risk because they are so flammable.

"This is quite a dangerous tree to be mass planting," Petermann said.

But ArborGen CEO Barbara Wells said eucalyptus trees have not proven invasive in dozens of tropical countries where they are widely grown on plantations. Also, ArborGen genetically modified the trees to limit their ability to disperse seed and spread.

Although the new field trials will significantly increase the number of genetically engineered trees being grown, Wells called it "very confined research."

"The total is 300 acres, but when you're doing tree research, that really is very small acreage," she said, noting that about 20,000 acres of genetically unaltered eucalyptus trees are already grown in central and southern Florida for production of wood chips and mulch. The new test forests will show whether the genetically altered trees can thrive farther north in Florida, where freezing temperatures can occur in the winter.

Donald Rockwood, a professor emeritus in the University of Florida's School of [Forest](#) Resources and Conservation, has worked for about 30 years on developing eucalyptus trees that thrive in Florida. He uses traditional breeding techniques, not genetic modification.

The genetically unaltered trees growing in controlled plantations in Florida have not proven invasive, are relatively efficient users of water and are no more flammable than other hardwoods, said Rockwood, who was hired by ArborGen to do a report on eucalyptus trees' invasiveness because of his experience working with them at the university.

Still, Rockwood said, introduction of any genetically altered species poses risks. For example, the gene that makes the trees resistant to cold could be transferred to surrounding plants, allowing them to spread farther north than nature intended.

"It certainly needs to be done carefully, it needs to be regulated and there

needs to be a period of well-defined observations," Rockwood said.

The ArborGen [trees](#) will be planted in seven counties throughout Florida, four counties each in South Carolina and Texas, two each in Alabama and Mississippi and single counties in Georgia and Louisiana. Rockwood said they can grow about 25 feet per year and be ready to harvest in less than three years.

ArborGen is a joint venture of International Paper, MeadWestvaco and Rubicon Ltd.

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