## GE Trees in the United States: An Update

Over November 17-19, 2004 a major conference on genetically engineered trees technology took place at North Carolina's Duke University in the US. Representatives were present from major biotechnology companies including Arborgen, Cellfor and others, as well as some of the leading institutions conducting research, such as the Institute of Forest Biotechnology, the Department of Energy's Joint Genome Initiative, the US Forest Service and the Canadian Forest Service, as well as many others simply interested in learning more about the technology of GE trees. Finally there were five of us who represented the "opposition"— organizers working to stop genetically engineered trees by educating land owners, researching potential legal action to stop GE trees, and through international campaigning, among other things. We had been invited to squeeze together onto a panel at the end in an attempt to add some "balance."

Most of the conference appeared to be a giant cheerleading session for the technology, with each presenter patting his or herself on the back for their accomplishments as well as applauding the work of those others in the room.

In his keynote presentation entitled "Precision Forestry," Jesse H. Ausubel of the Program for the Human Environment at Rockefeller University explained that forestry in our growing world needed to follow the model of agriculture. He argued that the intensification of agriculture, which started in the 1940s with the use of mechanized tractors and chemical fertilizers, pesticides and herbicides, was a great boon to all of mankind and that forestry must follow the same model. Intensive forestry plantations need to be pursued, he argued, including the use of chemicals and genetic engineering, in order to meet the growing need for forestry products in the world, while simultaneously protecting remaining native forests. He unfortunately neglected to mention that the agricultural "green revolution" has been a disaster for much of the Global South, and has served to create virtual monopolies of control over much of the world's food supply—leading to widespread malnourishment and starvation. He suggested these hi-tech tree plantations be located on "abandoned" agricultural lands (in the Global South).

While the name of the conference was "Landscape Genomics and Transgenic Conifer Forests," its overarching theme was public relations. Time after time, speakers presented their piece of the GE trees puzzle while asking, "How do we get people on board with this issue?" or "What are the 'white hat' issues in this technology that we can use to win over the public?" This made the event seem more like a GE trees marketing conference than a discussion on the state of the technology. Presenters acknowledged that selling GE trees is going to be very difficult because of the negative reaction people already have toward genetically engineered food. They also acknowledged that people's relationship to trees—as a wild, quiet refuge—would make people resistant to the idea of tinkering with them. As one presenter explained, "early education and cultural groundwork will be required to deploy GE trees across the private forest landscape."

These "private land" strategies for public acceptance of GE trees are critical in the US where 63% of the 'forested landscape' is in private hands. Industry must devise strategies to get GE trees onto these lands.

As the conference progressed, participants identified a few "white hat" issues they believed would be potentially useful in selling GE trees to the public. The first they examined was the genetic engineering of Chestnut and Elm trees to be resistant to the diseases that have largely wiped them out in the US. They felt that selling people on the idea that genetic engineering could bring back the beloved lost Chestnut and Elm trees was very useful.

A second idea explored was the use of GE trees to deal with the infestations of invasive species that have been devastating native forests all over the US. The US Fish and Wildlife Service states that invasive species are the number one threat to wildlife habitat. As a solution, one conference presenter proposed creating genetically engineered "native" species that outcompete the invasives. The fact that GE trees, by the very nature of their engineered trans-genes, are not "native," but potentially extremely invasive, was somehow overlooked. Also omitted was a discussion about how to deal with the causes of these invasions—such as the elimination of trade barriers under neoliberalism. Some of these so-called "trade barriers" include phytosanitary standards that are used to try to stop invasives from entering the country on imported logs or other such hosts in the first place.

The third idea, which was a theme of much of the conference was use of genetically engineered trees in plantations to store carbon emitted from burning fossil fuels (to supposedly help stop global warming). Participants loved this idea, and felt that it was a win-win strategy. Promote GE trees as a solution to global warming—who wouldn't love that?

Unfortunately, there are already communities in Brazil, Ecuador, Costa Rica and elsewhere who are experiencing the harmful impacts of so-called "carbon offset" forestry plantations. The addition of genetically engineered trees to these plantations will lead to forest health crises that worsen global warming and further compromise the ability of rural and forest dwelling peoples to live sustainably on the land (see related article in this issue).

Scientists in the US are proceeding with the technology of GE trees with blinders on. They look only at the "benefits" they have convinced each other that GE trees will bring, while ignoring the obvious lessons from GE agriculture that serve as giant warning flags. But at the same time they are very nervous. They know people hate this technology, and look for ways to "spin" it to make it more acceptable. This is a highly controversial technology that will only become more so as they prepare to execute commercial plantations of these franken-trees in and around communities throughout the world.

GJEP has a global campaign to stop genetically engineered trees. To get involved, contact them at info@globaljusticeecology.org http://www.globaljusticeecology.org or write GJEP, PO Box 412, Hinesburg, VT 05461 USA.

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