Transgenic trees: The industry race is on

The forestry industry's endless pursuit of bigger profits has led to the growing homogenization of trees cultivated for timber, pulp and paper production.

It started with the selection of the fastest-growing species, with straight trunks, sparse and thin branches, and wood suited to industrial use. Next came the adoption of the Green Revolution package of increased mechanization of forestry work, chemical fertilizers, toxic pesticides and herbicides to prevent other plants from competing with the industrially cultivated trees. Another key step was traditional genetic selection to "improve" the performance of tree plantations in terms of yield, which was promptly followed by hybridization and cloning of the "best" trees. The next stage was the genetic modification of trees to achieve even greater production yields, although this has been met with major resistance by social organizations, in addition to concerns raised by the scientific community related to issues like the risk of contaminating the genetic material of native trees. As a result, this stage is still largely experimental (WRM has prepared a series of information sheets on genetically engineered or GE tree research in countries around the world, available at:http://wrm.org.uy/subjects/GMTrees/Information_sheets.html).

The interests at stake have become more complex. Forestry and pulp and paper companies are linked to big laboratories and are forming increasingly vast transnational conglomerates. The hunger for profit continues to grow.

In recent weeks, a number of events have taken place that illustrate the push of the forestry sector – including forestry companies and biotech laboratories – for the commercial release of GE trees in two countries of prime importance for the sector: the United States and Brazil.

ArborGen, based in South Carolina, USA, is an international leader in the research and development of GE trees and is now taking steps to sell its trees in both the United States, where it already has experimental plantations, and Brazil. Transgenic tree plantations would reportedly serve multiple purposes: they would be used for the production of pulp for papermaking, for so-called "second generation biofuels" like cellulosic ethanol, and for the generation of electrical power from wood.

This past June 26 to July 6, the 2011 edition of the Tree Biotechnology Conference, an annual meeting organized by the International Union of Forest Research Organizations (IUFRO), was held in the state of Bahia, Brazil. The event was sponsored by pulp and paper companies like Veracel Celulose, a joint venture between the Swedish-Finnish transnational Stora Enso and Fibria of Brazil, and forestry biotech companies like ArborGen.

The conference gathered together 300 industry representatives and researchers. The issues discussed included the commercial future of GE trees. A number of Brazilian industry representatives stressed that is was urgent for Brazil to approve the commercial release of genetically modified trees as soon as possible, at the risk of lagging behind in the transgenic eucalyptus race. Meanwhile, the vice president of strategy and development at FuturaGen, one of the participating biotech companies, declared: "We are ready for the market. We have done all the performance testing. All that's needed

is the regulation." (1)

Concerns with falling behind in the race for transgenic eucalyptus are probably motivated by ArborGen's request to the US Department of Agriculture (USDA) for permission to sell 500 million of their GE eucalyptus trees annually. The trees are engineered to be cold-resistant, contain less lignin, and digest part of their own RNA in order to reduce their fertility (a process known as "Terminator" technology"). (2) (For more information on GE trees in general, see the briefing on the subject prepared by WRM at http://www.wrm.org.uy/subjects/GMTrees/briefing_GMT.pdf)

The USDA had already approved the experimental planting of 260,000 of these eucalyptus trees in 29 testing sites, a decision that prompted the filing of a lawsuit against the agency by the member organizations of the STOP GE Trees Campaign, which include the Global Justice Ecology Project, Dogwood Alliance and Sierra Club.(3)

Brazil is currently the world's fourth largest producer of pulp, and has experienced a rapid and massive expansion of large-scale industrial monoculture tree plantations. The resulting impacts on rural communities have been so serious that a major resistance movement has emerged, comprised of organizations like the Alert Against the Green Desert Network and Via Campesina, among others.

The efforts of the forestry industry to incorporate transgenic trees into its production model will not let up. That is why it is crucial to ensure that the resistance to these efforts does not let up, either.

This article is based on information gathered from: (1) A report by Stella Fontes published by the Brazilian newspaper Valor, July 4, 2011,http://www.valoronline.com.br; (2) Action Alert: End U.S. FrankenTree Experiments: Genetically Engineered Trees Risky, Unnecessary and Must Be Resisted Until Banned - http://forests.org/shared/alerts/sendsm.asp x?id=frankentrees; (3) "Groups Sue U.S. Gov't Over GMO Trees", Press release,http://www.globaljusticeecology.org/pressroom.php?ID=417