

The GM tree plantations bred to satisfy the world's energy needs

Israeli biotech firm says its modified eucalyptus trees can displace the fossil fuel industry

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It's a timber company's dream but a horrific industrial vision for others: massive plantations of densely planted GM eucalyptus trees stretching across Brazil, South Africa, Indonesia and China, engineered to grow 40% faster for use as paper, as pellets for power stations and as fuel for cars. The prospect is close, says Stanley Hirsch, chief executive of the Israeli biotech company *FuturaGene*. All that is missing are permissions from governments for the trees to be grown commercially, and backing from conservation groups and certification bodies.

Thanks to a gene taken from a weed, the company has found a way to stimulate the natural growth process. The company's modified eucalyptus trees can grow 5 metres a year. In just five and a half years they are 27 metres high.

Hirsch claims the gene-altering technique is integral to the UN's vision of a future "global green economy": "Our trees grow faster and thicker. The technology can be adapted to any trees. We can have a whole new supply of fuel. Yes, I do want to save the world."

The next step for *FuturaGene* comes in just over a year, when it expects to submit its final biosafety dossier to the Brazilian government. If successful, it should get permission to grow the trees commercially by 2015.

Developing countries, which have the best growing conditions will mostly benefit from this technology.

FuturaGene is owned by a giant Brazilian plantation group, which plans to invest \$800 million in a giant energy project in north-east Brazil to provide Britain and other European countries with "renewable" fuel for power stations.

But while Hirsch claims good planting and harvesting can enrich the soils and encourage flora and fauna in his proposed forests, he accepts that the environmental impacts of GM trees and many potential hazards and risks must be addressed. They include: the possibility of GM trees becoming more persistent or invasive; the effects they may have on soils or living organisms; the possible consequences for the animal feed chain; the fact eucalypts and poplars can disperse pollen over a wider area than cereals; and, because they live for decades, harmful effects may persist for far longer.

Hirsch claims to have met little resistance in Brazil. But conservationists, long opposed to such forests because of the ecological and social damage, claim the plantations are unpopular and that GM trees encourage clear-cutting of natural forests to make way for the "green deserts".