

Rainforest tree eats up pollution

By Julian Siddle

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A botanist in Brazil has found a plant that he claims may hold the key to reducing the amount of carbon dioxide in the Earth's atmosphere.

Jatoba, or hymenaea, a rainforest tree, has been found to grow much faster in atmospheres with high levels of carbon dioxide.

This could be important in fighting climate change, as carbon dioxide is one of the greenhouse gases that is making the planet warmer.

Marcos Buckeridge, a scientist at Sao Paulo's botanical gardens, told the BBC World Service's Discovery programme of his findings.

"We took seeds and grew them in normal air, which has 360 carbon dioxide parts per million, and in parallel grew plantlets at 720 parts per million, which is the concentration expected for 2075," Professor Buckeridge explained.

"The first thing we saw was that photosynthesis doubled in the plants that were growing at the higher CO₂ concentration."

Carbon sink

The research has revealed a mechanism which could hold the key to the effectiveness of carbon sinks.

These are based on the idea of planting more trees to absorb the huge amounts of atmospheric "pollution", especially carbon dioxide.

It is a theory which appeals to the governments of many industrialised nations, as it seems far simpler than the political and economic changes needed to make industry reduce emissions.

Simply planting large numbers of Jatoba trees may not be the answer, as they can take a very long time to reach maturity and specimens 500 years old are not unknown.



The plant was found in the Brazilian rainforest

“ We have to have the technology to provide for an emergency ”

Botanist Marcos Buckeridge



Jatoba tree thrives in high CO₂ levels

But the finding is significant because Professor Buckeridge believes the mechanism that allows the Jatoba to absorb more carbon dioxide could be isolated and applied to other plants.

This in turn could help lower the build-up of CO₂.

But that idea is controversial, because it would in effect create a large number of genetically modified organisms (GMOs).

"It will take years for us to understand how these things work," Professor Buckeridge conceded.

"I'm not saying we should have GMOs everywhere. But we have to be prepared.

"We should know what genes we have to change in order to increase carbon sequestration.

"We have to have the technology to provide for an emergency. We must be thinking of this research now; we do not know how high CO₂ levels will be in 75 years' time."