

Importance of an insignificant tree

From the Global Classroom
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On a trip to the Philippines I encountered a tree species I had never heard of before. My major interest was protection and preservation of Negros forests, a province in the Visayas Region, hopefully with extension of this ecosystem. I had worked on this project as a CESO volunteer (Canadian Executive Services Overseas) several years ago. To my chagrin the local conservation movement appeared to have failed completely and in fact new clearing of forests had reduced the area to about 3% of the land area.



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However I was introduced to a new and very dynamic forestry program which augured well for provincial prosperity and self-sufficiency with renewable production of oil. The governor and legislature of the province strongly supported large scale planting of *Jatropha curcas*, a tree species which produces nuts with a 38% oil content.

On returning home I found that the little known species was largely unheard of even in forestry circles. It was well publicized in Newsweek International but I have seen only one newspaper article referring to widespread planting of this tree in Africa and Asia despite the fact the species shows promise of being a major global supplier of renewable oil in world rapidly running out of conventional fossil fuel which currently is basic to our way of life.

This week my son-in-law connected me with a conservation movement, 'Inheritance India' which is promoting large-scale planting of *Jatropha*. Despite relatively low wood production capabilities the tree holds potential answers to many of the world's social and technological problems.

Many people especially in the underdeveloped world suffer from lack of living resources, and many global problems boil down to the need for poverty alleviation. Planting of oil rich seedlings has considerable potential for adding much needed income for small land-owners. The nuts can be collected after the first year of planting

and can be used by crushing them to provide cooking and lighting, a replacement for costly purchase of resources as well as source of energy for small farm implements.

On a larger scale, collection of nuts is labour intensive hence providing meaningful employment for families struggling with the burden of providing school fees and uniforms. When sold to processing company, acid is removed and an ester produced which is biodiesel fuel. From national perspective such a transportation fuel can greatly reduce country's dependence on costly energy importation.

From an ecological perspective, probably the most exciting aspect of *Jatropha* production is the ability of the tree to grow on marginal sites. The publication points out that *Jatropha* plantations could be created across the nation's wastelands, allowing fallow land to be used productively. There is also the possibility of using this tree for desert reclamation. The demand for diesel fuel in India is growing by over 10% per year contributing to about 40% of total petroleum product sales in the country. There are over 65 million hectares of wasteland in India with a potential additional 174 million hectares classed as marginal.

There is no shortage of low quality land throughout the world, Should this tree species prove to be suited to savanna lands and particularly to desert conditions there is a brilliant future in sight in meeting energy needs. Africa's Sahara Desert, parts of which might be suitable, is roughly the size of the United States. One scientist has suggested that with large scale production of this nutoil species southern Africa could well become the new Saudi Arabia. Apparently this renewable oil burns with far less emissions than fossil fuels making it of prime importance in the field of climate change. Low productivity land is global concern and poverty is no stranger to many countries in the world. It is strange that there is so little publicity about such an important potential source of fuel. Canada imports considerable oil from other parts of the world hence stands to gain a great deal from renewable supplies from Africa and Asia. In the long run we along with the rest of the world will have to face dwindling supplies of fossil fuel while major concern is air quality and the hazards of global warming.