

Energy Report - November 2007

## **Sustainable Biodiesel Feedstock**

**Jatropha: A strategic option**

**KnowGenix**

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## Position Paper

The global energy sector stands polarized with proponents of fossil fuels and renewable energy finding it difficult to meet on common grounds. The rise of the biofuels industry was a spin off the radical reassessment of traditional energy sources which were defined by large environmental footprints. Despite the promise biofuels are not a panacea, but another choice among a spectrum of energy options.

The biofuel business is a complex web reacting continuously to the traditional oil business as rising oil prices spur demand for biofuels. Meeting the ever increasing demand for biofuels call for mega mono cropped energy crop plantations at the cost of prime forest land, and land for food production. It would also call for initiatives in crop cultivation technologies and competitive sourcing of appropriate feedstock choices - all of which can alter the biofuel economics.

The focus is now on non food crops with Jatropha rediscovering itself as the new pin up boy of renewable energy industry proponents. Contemporary trends across the world indicate a pronounced shift towards Jatropha as a more viable and sustainable feedstock for biodiesel compared to other food based crops such as Palm, Soya etc.

The present mixed reaction over Jatropha not only highlights how swiftly investors are shifting gears due to shortcomings of other renewable contenders but also brings forth uncertainties over the economic viability of large jatropha plantations.

Asia and Africa have now emerged as key investment hotspots for Jatropha. These investments need to be based on realistic and conservative estimates of Jatropha production, resource inputs such as water and chemical, labor and also in the cost-benefit analyses of end-product and by-product.

Increasingly the issue of sustainability in biofuel feedstocks cultivation accompanied by food vs fuel debate has become a rallying point for all stakeholders in this business. Long term sustainable strategies will be central to the economic and ecological viability of these ventures.

This position paper discusses the sustainability of non food crops such as Jatropha against the backdrop of current biofuel policies and initiatives in developing regions. It looks at the broader issues concerning the advocacy of food and non food crops needing large scale chemical inputs based on fossil fuels, large scale deforestation and mono-cropping techniques to feed the planned mega biodiesel projects.

It attempts to answer pressing questions about Jatropha based projects. Is Jatropha really the best crop and does it leave the least environmental footprint? What are the impacts of large scale Jatropha plantations being planed in developing nations to feed the energy demands of western world? How does the Jatropha economics work for the developing nations?

To what extent is it more conducive in reducing GHG emissions? Is Jatropha cultivation and propagation sustainable globally to feed the needed market demand? What are the options being researched to optimize Jatropha cultivation?

*KnowGenix, Mumbai, India, is a growth strategy service firm with Chemicals, Materials and Energy practices. To learn more about its activities please visit [www.knowgenix.com](http://www.knowgenix.com). For a copy of the position paper send a mail to [strategy@knowgenix.com](mailto:strategy@knowgenix.com).*