

■ Bio Special ■



## “Business prospects of biofuel are promising”

—KV Subramaniam, president and CEO, Reliance Life Sciences, Mumbai

### What are the future prospects of biofuel as an alternative to nonrenewable fuel?

Biofuel is poised for a big leap in the future and if the challenges of economics, scale up and logistics are being adequately addressed. A crucial factor in the progress of biofuels would be successful commercialization of second generation biofuels. This could witness the biofuel replacing a substantial quantity of nonrenewable fuel.

### How is the global demand for biofuel? Can you give some statistical information on the Indian biofuel market?

In 2008, the global biofuel usage was about 1.66 percent of the total conventional fuel used. Currently, bioethanol is a predominant contributor to the biofuels market with over 85 percent market share. The Indian biofuels market is at a nascent stage. About 150 to 200 tonnes of ethanol is used annually

for fuel blending in India. Statistics on use of biodiesel is not available as it is mostly distributed through unorganized means.

### What are the key areas of focus for Reliance Industries on the biofuel front? What are the major R&D initiatives taken by your company?

Reliance is developing an India-centric, global biofuels initiative covering biodiesel, from jatropha and other non-food oil seed crops; bioethanol, from cellulosic biomass and biobutanol, from cellulosic biomass.

The Reliance Biofuels initiative is uniquely integrated. It is based on the principles of using marginal land and staying away from fertile land used for food crops; working with marginal farmers to help improve quality of rural livelihoods and incomes; promoting multi-culture agronomy and building a business that is robust to low prices of crude oil.

Reliance has successfully grown jatropha along with horticulture and medicinal intercrops. It has also developed high-yielding hybrid varieties of jatropha and a plant tissue culture protocol for jatropha. Reliance has commissioned a 6,500 tonnes per year pilot plant in Kakinada, Andhra Pradesh, for biodiesel production and developed second-generation processes for production of bioethanol and biobutanol at a lab scale.

### How is the business potential of biofuel industry?

Business prospects of biofuel do look very promising. There is a vast amount of waste land, which is not being cultivated by farmers in India. If this potential is tapped, biofuel could contribute to alleviating our energy security concerns. ■

Pradeep Kumar

**M**umbai-based Reliance Life Sciences is developing business opportunities in the domains of medical, plant and industrial biotechnology. The biofuels initiative is under the auspices of Reliance Biofuels Private Limited, a 100 percent subsidiary of Reliance Life Sciences. KV Subramaniam, president and CEO of Reliance Life Sciences expresses his views on Reliance's biofuel initiatives and the state of biofuel sector in India.

### DuPont focuses on cellulosic ethanol technology

Haryana-based DuPont Applied BioSciences, a division of E I DuPont India, has plans to develop its business towards cellulosic ethanol technology. The company has initiated joint ventures to boost the initiatives, Gowri Nagarajan, business development manager of DuPont Applied BioSciences shares more about the company's business strategy.

“DuPont is focusing on cellulosic ethanol technology through a 50/50 joint venture with Denmark-based Danisco. About \$140 million (about Rs 671 crore) is invested to create the DuPont Danisco Cellulosic Ethanol Company (DDCE) in partnership with the University of Tennessee. The initial feedstock that will be used in the pilot demonstration facility, expected to be operational by December 2009, will be corn stover and subsequently switch grass will be targeted. DuPont is also engaged in the joint venture with British Petroleum (BP) where the focus is to develop biobutanol, next generation biofuel, which has certain specific performance advantages over ethanol. The two companies have announced the formation of Butamax Advanced Biofuels, a joint venture that will focus on commercializing biobutanol technology in the marketplace. The technology demonstration located in Hull, UK, is expected to be operational in 2010 and will start its commercial activity in 2013,” says Gowri Nagarajan, business development manager, DuPont Applied BioSciences, E I DuPont India, Haryana.

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