

# The biofuel grind

Or why India's 20% blending target will remain impossible to achieve



## FARM VIEW

SURINDER SUD

**T**he biofuel development programme has made little headway despite liberal sops by way of subsidies and access to

land. The target of 10 per cent blending of petrol and diesel with biofuels by 2011-12 has already been missed. And the goal of 20 per cent blending by 2016-17, mooted in the National Biofuel Policy of 2009, seems wholly unattainable.

There are several reasons for this. Producing adequate ethanol from sugarcane molasses for 20 per cent blending seems impractical — for, it will require a major expansion of the area under sugarcane cultivation. It is also deemed commercially unviable. On the other hand, producing biodiesel from jatropha — a tree-borne, non-edible oilseed — is beset with innumerable

problems and risks that deter farmers from growing this plant and investors from setting up oil extraction and processing units.

Various studies on jatropha have indicated that this biofuel crop is neither profitable nor pro-poor. Nor is it possible to raise healthy jatropha plantations on uncultivable or degraded land without irrigation and fertilisers. Most of the available strains of jatropha are low yielders. Besides, the technology and agronomic practices for jatropha cultivation have not yet been perfected. Technologies for efficient post-harvest management and processing of jatropha seeds, too,

require some fine-tuning. Moreover, the long gestation period of three to six years for getting returns from these plantations is a formidable disincentive. It is also feared that the diversion of land to jatropha will result in loss of grazing areas and create fodder scarcity.

Most of these concerns have been borne out by a recent systematic study on the biofuels sector conducted by the New Delhi-based National Centre for Agricultural Economics and Policy Research (NCAP), with the participation of experts from the global farm policy think-tank, the International Food Policy Research institute (IFPRI). Published by NCAP as a policy paper (No 27), the report does not mince words and states that sugarcane-based ethanol production is "absolutely unsustainable in India". On jatropha, this report cautions

that the government must keep in view the bitter experience of its cultivation in Andhra Pradesh and Tamil Nadu before promoting it on a national scale.

In Andhra Pradesh, unconvinced about the viability of jatropha plantations, farmers diverted a bulk of the subsidy given by the government for jatropha to other crops. The state is now looking at pongamia (another tree-borne, non-edible oilseed) to use for biofuel production. In Tamil Nadu, jatropha seedlings — offered free of cost by the government — found few takers.

Nevertheless, the Union government remains upbeat about promoting biofuels in the hope of strengthening energy security. A National Biofuel Mission was launched in 2003 for this purpose. But no more than 0.5 million

hectares have come under jatropha plantations so far.

This is far lower than the 3.45 million hectares that the NCAP study reckons will be needed to achieve even a five per cent blending level. The target of 20 per cent admixing will require jatropha to be planted over a massive 26.50 million hectares, an area almost equivalent to that under wheat. Sparing so much land for jatropha is unthinkable given that even vital industrial and infrastructural projects find it hard to access land.

Similarly, in the case of ethanol, the NCAP study estimates that the sugarcane acreage will need to be more than doubled from the current level to produce the projected 736.5 million tonnes of molasses-based ethanol for 10 per cent doping with petrol. This, again, is impractical as also unadvisable,

considering that sugarcane requires fertile land and copious water to grow. In fact, the study has found that the production of ethanol from sweet-sorghum, a multi-utility food, fodder and sugar crop, may be a relatively better option for producing ethanol. Compared to sugarcane, this crop needs far less water.

Clearly, any policy for sourcing biofuels from land-based feedstock like sugarcane or jatropha is unlikely to work in a country in which land and water are scarce. Thankfully, the use of agricultural land for biofuel production is strictly prohibited. However, a large diversion of even non-farmed land for this purpose seems ill-advised. There is, therefore, a need to revisit biofuel promotion policies.

surinder.sud@gmail.com

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