

India's dream of green oil fields

Written by Magnus Flacké and Ida Søgne Tveit

The debate in recent years over biofuel in Europe has taken on a new dimension. Will the western quest for clean environment compromise clean development? The discovery of the plant jatropha as biofuel has sent Europeans into a frenzy. Jatropha is a drought-resistant plant that grows on wasteland, and therefore, for its proponents, the question of food versus fuel is irrelevant. This attitude has also been adopted by the Indian government. The Indian vision is to grow 7.5 million tonnes of jatropha-based biofuel a year, which will generate employment for 5 million people. Who will benefit? Is there really such a thing as wasteland?

Food-insecurity chronically affects 350 million people in India. Today, the population is growing at a faster rate than that of agricultural production. 52 percent of India's population relies solely on agriculture, and many of these farmers do not have any land to spare. In India, a country which is trying to regain its self-sufficiency on food, all land is valuable.

Jatropha trees are a common sight in the dry north-western state of Rajasthan, often used as fences to keep grazing cattle away and to make household products. Four jatropha trees are scattered around the house of Gutham Lal Meena and his wife Thavri Bai Meena in the village of Devgarh. Their family of eight keeps two cows and four oxen and grows food crops on a patch of arid land. Devgarh receives less than 100 hours of rain a year, and to an outsider cultivation seems like an impossible task three months prior to the monsoon. The Meena family lives on the plateau where the water table is deep, so water access is even harder here than down in the valley. Mr. Meena uses his four jatropha trees to make household products.

- I use it to make soap. The tree is not edible, not even the cows will touch it, and it is no good for fire fuel either, says Mr. Meena. Each jatropha tree give him and his family enough seeds to produce five kilos of soap, but full grown trees can give seeds enough to produce up to 10 kilos. Most of the soap is for personal use, but they earn about Rs 8-10 per kilo when they sell the surplus on the market. This is a little more than one Norwegian krone.



A picture of green jatropha plants.

Mr. Meena is aware that jatropha can also be used as biofuel. Most households in the area engage in subsistence farming and animal husbandry. When Mr. Meena meets his neighbours in the village they often discuss biofuel.

-It is a buzz going on, but we don't really know much about it. There are no factories in the area to process the oil into biofuel, so we would have to transport it a long way. When asked whether he would consider growing jatropha for biofuel if the infrastructure was in place, he is reluctant.

- Yes, maybe, but my land is small, and I would not

make much profit. If it was possible for small scale farmers to join together and form cooperatives, maybe I would start to grow jatropha for biofuel. But it's a lot of uncertainties and many farmers are waiting for the state government's final offer.

The main reason why jatropha has created such a buzz is that it can be grown on poor soils, and will therefore not be competing with food production. EU has the objective that 20 percent of fuel consumption in Europe will be biofuel by the year 2020. In order for EU to achieve this goal, land area the size of Belgium is needed. However, Belgium is not available, so all eyes are turned elsewhere, to countries such as India. Jatropha already fulfils the EU norm for biofuel quality. Jatropha can also compete with other types of biofuels in terms of price. According to official Indian estimates 40 million hectares of the total land area is categorized as wasteland. The idea of turning unproductive wasteland into green oil fields sounds dazzling. However, what the Indian government today considers to be wasteland is in reality used as pasture land, and in some cases even cultivated for agriculture.



The European craving for green energy might turn this wasteland into a green oil field. Jatropha plants in the horizon.

A little less than a hectare of Mr. Meena's land is considered wasteland. The state of Rajasthan has approached him and asked if he will use his wasteland to grow jatropha for biofuel. - But if I use that land to grow for biofuel, then what will my family eat? Mr. Meena definitely does not consider his wasteland as wasted land. - It is not great land, but we get some food out of it.

The Indian government is well aware of the economic potential of their wasteland. In Rajasthan there are still a lot of uncertainties regarding biofuel production. Other states have more established structures in place in regards to the biofuel production industry. The state of Chattisgarh is in the forefront when it comes to promoting jatropha biofuel, and many incentives are dangled in front of larger companies to encourage participation. One such sweetener is allowing private companies to lease government wasteland, for a trivial amount of money. The state government also provides the infrastructure required to keep the value adding process within state borders.

The Foundation for Ecological Security (FES) is a non-profit organisation working to restore degraded lands in ecologically fragile areas in seven Indian states, including Rajasthan. They are not opposed to cultivating wasteland for jatropha plantations. - The main concern is that marginalized communities change their land use to cash crop production alone. This may harm small scale farmers and could lead to food insecurity, says B.K Sharma, the team leader of FES in the city of Pratapgarh, Rajasthan. Families that were once self-sufficient in food supply will have to buy their food on the market.

Jatropha may be for India what oil is for Norway. However, the solution is not as clear-cut as many advocates argue. To ensure that the nation's wealth does not compromise the livelihood of small scale farmers, it is vital that policy makers take the concerns of farmers, such as the Meena family's, into consideration.

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