

Potential boom for biofuels in Tanzania?

Growing naturally on marginal lands or planted as a fence around cattle kraals by pastoralist communities in Uganda, *Jatropha curcas* has long been shunned by farming communities due to its inedible and poisonous characteristics. In Tanzania, communities know it only as the 'graveyard' tree. As a result of these negative perceptions in many communities in East Africa, the beneficial characteristics of this plant are often overlooked.

Jatropha curcas L.

Known in Swahili as *Mbono Kaburi*, *Jatropha* is a perennial crop that grows in equatorial regions. The plant requires little water or fertilizer and can be grown in arid or semi-arid conditions, and consequently is sometimes grown in degraded areas where few other crops will grow. *Jatropha* grows as a bush up to six metres high and can live up to 50 years. Seeds are harvested after around three years. As the plant is toxic, it can be grown as a hedge around food crops to protect them from grazing animals.

However, through a concerted promotion campaign, a Tanzanian-based company, Diligent Tanzania Ltd., is working to change people's attitude towards this crop by re-naming it the 'dollar' tree, due to its potential to improve incomes and farmer livelihoods.

In an effort to become the largest sustainable biofuel supplier in Tanzania, the company, with funding from the Dutch Government has set up a plant in Arusha town to produce *Jatropha* oil and biodiesel for powering generators and as fuel for cars and other vehicles.

The machines installed at the *Jatropha* factory are capable of pressing 10,000 kg per day, states James Michael, the chemical and process engineer at the plant. However, he adds, current supply of *Jatropha* seeds from

local farmers is not yet sufficient to sustain continual production; four kilograms of seeds are required to produce one litre of biodiesel.

The company's General Manager Janske van Eijck says, "We are encouraging the cultivation of *Jatropha curcas* among farmers so we can keep the machines running throughout the year." James reports that the company, which started operating three years ago, was able to produce 10 tonnes of oil in 2007.

Although the farmers are slowly taking up cultivation of the plant, van Eijck believes many farmers will soon adopt and benefit from the neglected plant.

"We already have 5000 outgrowers. We are giving them seeds for planting and knowledge on how to cultivate it," she says. Some of the advice the farmers receive is how to space the *Jatropha curcas* plants when intercropping them with food crops.





Van Eijck adds that farmers often first wait to see if neighbours are benefiting before being convinced to grow it themselves. However, she is sure that more and more farmers will soon see the advantages of Jatropha and adopt it, particularly as water and nutrient requirements to grow the crop are not high and farmers receive a fair and guaranteed price for selling the seed.

Jatropha seeds are collected from a network of farmers contracted for a period of 10 years. Local shops or farms act as collection points. The seeds are then processed into vegetable oil at the factory in Arusha or further processed into biodiesel. Pressed cakes from the Jatropha seeds are sold as fuel for stoves to local industries and households.

“Four companies in Tanzania are already buying and using the biofuel for their cars,” concludes van Eijck proudly. “We are committed to doing business in a sustainable way. In other words, we believe in doing well by doing good, both for local people and the environment.”

Contact

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