



Barbados nut

Jatropha curcas

About me: I am a small tree, with a distinct grey bark and spreading branches. I have yellow heart shaped flowers. My black seeds can be found in a capsule once the fruit has dried. I usually have 3 oily seeds per capsule which contain a high amount of Jatropha oil, anywhere between 28-80%. I am not edible. I like warm temperature and free draining soil but I can also withstand long periods of drought.

Where do I come from? I am native to Central America and Mexico

How is the bio-fuel produced? The oil is extracted via hand operated machines which shell and crush the seeds. The oil is then processed using a chemical process called transesterification. Transesterification is the reaction of a fat or oil with an alcohol to form esters and glycerol. Alcohol (propanol, ethanol or butanol) is required to speed up the reaction time as it is a reversible reaction. Transesterification changes the viscosity (density) of the oil which can either be used in its crude form or blended into different fuels at different temperatures to improve its stability at higher temperatures.

How is my energy used? The bio-diesel produced can be used to power cars as a mixed fuel or in a hybrid car suited to be powered by bio-diesel.



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