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## Jatropha Tree as a Source of a Fuel for The Future:An Overview

Said Fatouh Hamed\*, Ghada A. Abo- Elwafa and Ferial Zaher

Fats and Oils Department, Food Industries and Nutrition Division, National Research Centre, Cairo, Egypt

\*Corresponding author: saidfatouh123@yahoo.com

**Abstract:**The whole world is currently facing two crisis in food as well as in energy. The energy crisis is getting worse with time due to the expected depletion of the natural reserves of petroleum in the very near future. Such depletion will be certainly reflected on the whole products derived from petroleum. One of the major products is diesel oil which is commonly used to operate diesel engines in the transportation vehicles. Therefore, an interest is now directed worldwide to find alternatives to diesel fuel and to explore suitable sources for these alternatives. Biodiesel fuel derived from plant oils has been proven to be an excellent alternative for diesel fuel. Jatropha oil, a non edible oil, which can be obtained from the fruit of *Jatropha curcas* can be used for such purpose and the product has been proven to have very good fuel properties compared to regular diesel fuel.

This paper outlines all basic information about the tree of jatropha as well as its cultivation worldwide, its benefits, the composition of the fruit, the composition as well as characteristics of the oil that can be extracted from the seed and the toxicity of meal after oil extraction. The methods used for oil extraction, general uses of the oil and the potentiality of the oil to produce biodiesel fuel are also discussed. The current status of jatropha cultivation in Egypt are also referred to.

**Key words:**Jatropha Tree; Cultivation; Jatropha Oil; Extraction; Biodiesel.

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