

PROJECT REPORT

**“SWIETENIA MAHAGONI – THE POTENTIAL
SOURCE FOR THE PRODUCTION OF BIODIESEL”**

(Sponsored by Karnataka State Biofuel Development Board - 35S_B031)

Submitted to

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ABSTRACT

Biofuels are given serious consideration as potential sources of energy for the future, particularly in developing countries like India. Due to recent petroleum crisis and unavailability of petroleum diesel, the demand for petroleum diesel is increasing day by day; hence there is a need to find out an appropriate solution. Biodiesel can be mixed with petroleum-based diesel in any proportion. This interest is based on a number of properties of biodiesel including the fact that it is produced from a renewable domestic source, its biodegradability, and its potential to reduce exhaust emissions. Petroleum prices are increasing and they will deplete within few decades, it is clear that more can be done to utilize domestic non-edible oils while enhancing our energy security. The economic benefits include support to the agriculture sector, tremendous employment opportunities in plantation and processing. The non-edible sources for Biodiesel production in India are *Madhuca Indica* (Mahua), *Jatropha curcas* (Ratan Jyot), *Pongamia pinnata* (Karanja) and *Melia azadirachta* (Neem) which contain 30% or more oil in their seed, fruit or nut. In India, as edible oils are in short supply, non-edible Tree Borne Oil seeds (TBOs) of Karanja, Jatropha, Mahua and Neem are being considered as the source of Straight Vegetable Oil (SVO) and biodiesel. *S. mahagoni* is widely planted in homesteads, roadsides and marginal lands. This is very common in hilly regions like Western Ghats. The seeds have been found to be potentially rich in fat (64%). This can be used to produce Biodiesel apart from the plants which are already in use for biodiesel production. In this project, we have tried to produce the biodiesel from the oil of *S. mahagoni* seeds.