

Potential Crops for Biodiesel in Thailand

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Abstract

The unstable rising of fuel price in the world market has prompted research, public and commercial interests in exploring for new alternative energy resources such as biodiesel and bioethanol derived from vegetable oils and economic crops. Biodiesel is made through a chemical process called transesterification whereby the glycerin is separated from the fat or vegetable oil. The end-product is called methyl ester and can be produced from many potential energy crops such as coconut, soy bean, palm, sunflower and jatropha curcas. For a truly renewable source of oil, economic crops or other similar cultivatable sources would have to be considered. In Thailand, different plants produce yields per area and have farm prices at different rates. However, the amount of usable oil produced from each crop (e.g. oil extracted per kg) may provide a better insight for the purpose of comparison in terms of net energy gain and need to be further investigated. At present, the Royal Thai Government has officially selected areas and promoted the plantation of palm for biodiesel. Another potential alternative is the Jatropha tree that provides significant fuel in India and is currently in the attempt of restoration efforts for oil use in Thailand.