Indian laurel

Calophyllum inophyllum

Image taken by Tim Dickson (2009) Australia

About me:

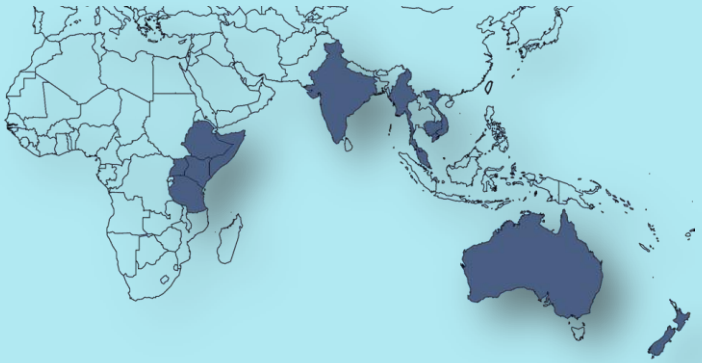
I am a large evergreen tree with a broad irregular crown. My leaves are dark green with a thick waxy coating. This can make my foliage look dense. My white flowers are small and fragrant, flowering almost all year round. The seeds are protected in large round kernels. I grow best in sunny sandy soils.

Where do I come from?

I am native to India, East Africa, Southeast Asia, Australia and South Pacific.

How is the bio-fuel produced?

The kernels are dried and then cracked to obtain the seeds. The seeds are then crushed for the oil. The oil, typically bluish yellow, is refined in order to remove any impurities. Due to the high fatty acid content in the oil this has to be reduced via esterification. Esterification is the general name for a chemical reaction in which two reactants (typically an alcohol and an acid) form an ester as the reaction product. An acid catalyst and methanol are typically used to speed up the reaction. This is carried out at 57 degrees. Once the fatty acids are below 1%, the oil can undergo the tranesterification process (Transesterification is the reaction of a fat or oil with an alcohol to form esters and glycerol). This creates the bio-diesel as an end product.



How is my energy used?

Direct combustion (seed shells and briquettes can be used for cooking and heating) and transport fuel for cars.

Image taken by Tatters (2009)

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