



Ceylon ironwood

Mesua ferrea

About me:

I am a large evergreen tree growing up to 36m once mature. My bark is bright brown, with an orange layer underneath. I grow best in sub-canopy forest and river valleys where there is enough shade. My leaves are red when young and become light green at maturity. My fragrant flowers are white and yellow and flush in the spring when temperatures are optimal (24- 29°C). I am mostly famous for my heavy wood and mainly used in heavy construction i.e. railroads; however I am also used for my medicinal properties.

Where do I come from?

I am native to the wet tropics of Sri Lanka, India, southern Nepal, Burma, Thailand, Indochina, the Philippines, Malaysia and Sumatra.

How is the bio-fuel produced?

Once the seeds have been harvested, they are shelled and milled into a fine power. The powder is then processed (Soxhlet extraction method) to extract the rich reddish-brown oil, removing any impurities in the process. The oil is then combined with ethanol and Butan-2-ol at varying ratios. Once at room temperature the mix undergoes a process called micro-emulsion (rendering the oil stable). The end product is a clear and thermodynamical stable fuel. As this is a new source for green energy there is still detailed research being carried out.

How is my energy used?

The micro-emulsified fuel otherwise known as hybrid fuel is suitable for fuelling cars. According to recent research the fuel is just as effective and similar to regular diesel.



Image taken by Dinesh Valke (2008) Karamji, India.



Image taken by Reinaldo Aguilar (2013) Costa Rica

