

# Socio-economic Impact of Biodiesel Production from Oil of Sri Lankan Freshwater Algae

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Environment pollution is one of the drawbacks of fossil fuel burning. Many countries have been looking for alternative energy sources substitute to fossil fuel. Biodiesel is used as an alternative source for fossil fuel. When compared to other terrestrial crops, micro algae has high potential to produce bio energy. Sri Lankan fresh water algae have good potential to be a source of bio diesel production. The objective of the study was to evaluate the potential and socio-impact of biofuel production from fresh water micro algae using different growing media such as the Guillared and Ryther's modified F medium, two concentrations of Albert solution and fresh water (Tap water). All the media were sterilized using UV light. The three samples of algae were used for the experiment. The sample A consists majorly with algae spp *Scenedesmusbijuga* and *Selenastrumquadricaudum*. The algae spp *Hormidium* and *Netriuminterruptus* are more prominent types in sample B and Sample C consists with algae spp *Spirotoenia* and *Closteriumparvulum*. The treatments were replicated three times and the experiment was designed according to the RCBD. The better growth performances were observed in algae sample A grown in half concentration of Albert solution compared to other sample as it observed highest absorbance value. The significantly highest dry matter yield was observed in sample A as 0.3941 g/l in half concentration of Albert solution. The highest dry matter yield in sample B and C type B were shown in Guillared and Ryther's modified F medium (0.3603 g/l) and full concentration of Albert solution (0.3507 g/l) respectively. The above results reveal that, Sri Lankan fresh water algae can be used as feed stock to produce biodiesel., Zero emission of Nitrogen (NO, NO<sub>2</sub>) will affect for green house effect, low Environmental Hazards, low rate of Human Health Getting Affected, alternative for Rising Prices of fossil fuel, Zero emission of Sulfur dioxide (SO<sub>2</sub>) is cause for avoid of acid rain , zero impact on Aquatic Life by Oil Spill , zero Coal Mining, no need huge amount of reserves. Discovered socio impacts of biodiesel are critically influence to social and socio-economy.

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