

**The recent innovations in biofuels and effective strain improvement for sustainable development goals**

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**ABSTRACT**

Biofuels have come in of different generations. The algae can be used as an efficient biological producer of oil, biomass, and biofuels. They have high photosynthetic efficiency and a faster growth rate than other plants, they can grow in treated wastewater, and cheap fertilizers can be used to provide the nitrogen source. The technology can utilise non-arable land to grow the algae. The production is not seasonal and can be harvested daily. An algal photobioreactor can provide continuous production of biomass and advanced technologies are available for the isolation of oil from biomass. The system has a higher yield than other biodiesel feedstocks, less spatial requirements and does not compete with food production. The recovery or harvest technology, and resilient villages and urban populations with the utilization of resource is essential. The implementation of SDG requires fuel at cheaper price and biofuel provide the opportunity.