

Biofuel production from algae has shown promising results and has the potential to address various energy and environmental challenges. Carbon dioxide absorption: Algae have the ability to absorb carbon dioxide (CO<sub>2</sub>) during photosynthesis. Cultivating algae for biofuel production can help mitigate greenhouse gas emissions by capturing and utilizing CO<sub>2</sub> from industrial sources such as power plants or factories. Potential for various biofuel types: Algae can be used to produce different types of biofuels, including biodiesel, bioethanol, and biogas. Certain strains of algae have been found to have oil content ranging from 20% to 50% of their dry weight, making them a highly efficient source for biofuel production. 2.3.4.5.