

O 46. TREATMENT OF BIOGAS SLURRY BY MICROALGAE

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ABSTRACT: : Global warming has become a current issue of concern in the world today. The main source of global climate change is the increasing amount of greenhouse gases released from fossil fuels that provide the energy needed for human activities. Scientists are seeking to find solutions to global warming through the mitigation of the greenhouse gases. Biofuels such as biodiesel, bioethanol and biogas have been considered as an environmentally friendly fuel source, are now being used and are intended to be widely used in the near future. Biogas slurry, also known as digestate during anaerobic processes, contains a significant proportion of nutrients. In recent years, numerous studies have been performed to treat biogas slurry, and to produce algal biomass, by removing nutrient from anaerobic effluents by microalgae-based technology. When micro algae are cultured in nutrient-rich effluents, this provides a source of food for the growth of microalgae. As a result, the produced biomass can be used for biofuel production. Furthermore, the biogas slurry with contaminants especially with nitrogen and phosphorus, which has the potential to contaminate underground and surface water resources can be treated by this way. In this study, the literature on biogas slurry and treatment of its by microalgae cultures have been reviewed taking into account the management of biogas slurry for water pollution and biomass production for biofuel.

Keywords: Biogas slurry, Biomass production, Microalgae, Treatment, Water pollution