

Biogas Generation Using Anaerobic Treatment for Poultry Slaughterhouse Waste

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ABSTRACT

Poultry waste is one of the major pollutants, if not managed properly. Poultry farming wastes containing excreta, bedding material, waste feed, dead birds, broken eggs, feathers, and offal could emerge into the environmental problems. It is a Proven technology and disposal methods are necessary to mitigate their threat on the environment. So, this study investigates on the management of poultry offal waste in Mettupalayam municipality, Tamil Nadu, India. The quantitative and qualitative analysis of poultry offal waste is carried out and analyze the potential of anaerobic digestion for material recovery and energy production from Poultry slaughtering by-products and waste. For this energy production using Continues Stirred Tank Reactor (CSTR) for anerobic treatment with an effective organic loading rate. This CSTR respond with a biological process in which organic matter is degraded to methane under anerobic condition. Energy produced from the CSTR will be utilized for slaughterhouse utilities to replace the fossil fuels and thereby to reduce the CO₂ emission.

Keywords: *Anaerobic digestion, Methane production, Poultry slaughtering wastes, Energy Production, Renewable energy*