

# Utilization of Biomass for Production of Biogas – An Overview

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**Abstract:** India is a developing country comprising more than one-sixth of the world's population. Solely due to this reason there is a large dependence on energy resources for meeting the daily requirements particularly the fossil fuels which are generally regarded as undesirable for several reasons. Among the various other energy resources available, biogas has emerged as a promising fuel for the future with numerous advantages. This paper throws light upon the progress of biogas technology in India, suggesting how this valuable potent resource can be used for future sustainability. This study can be helpful in implementing biogas technology in many rural areas across India thereby establishing social and economic stability. Biogas is produced by anaerobic digestion of manure, energy crops (mainly maize), wastewater treatment sludge and organic waste. Biogas is a renewable energy source. Sustainability requirements are increasingly important. As a greenhouse gas, methane is 25 times stronger than carbon dioxide, so small leakages of biogas have a strong negative effect on the total greenhouse gas performance of the energy production pathway. This chapter covers an overview from the literature concerning methane emissions from different steps in the biogas production chain with reference to relevant selected articles.

**Keywords:** Renewable energy, Anaerobic digestion, Biomass, Biogas, Energy crops.

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