

# The Effectiveness of Anaerobic Digester in Farm Waste Treatment

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## ABSTRACT

*Currently, farm wastes such as swine, poultry manure, and cattle dung are directly disposed or discharged into the open channels and river systems. These problems are clearly evident among the small scale farmers who cannot afford to have a sophisticated and costly waste treatment plants. It causes an alarming rate of environmental pollution, especially water pollution. Thus, a methodology for the treatment farm waste namely anaerobic digester is proposed to maintain the water quality. At the same time this system is also designed to produce biogas for domestic use and organic fertilizer, which can be used for domestic or industrial purpose. Odour control, renewable energy production, pathogen reduction, greenhouse reduction, and reduction in total oxygen demand of the treated manure are some of the key expected benefits of an anaerobic digester. The research was started by designing an anaerobic digester, which found that the digester successfully yielded gas. From the study it is recommended that the best performing digesters are the digesters that are exposed to high temperature and contained higher solid concentrations. The system suggests that the implementation at the field scale may help the farmers, reduce pollution and even give more profit to farmers.*

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