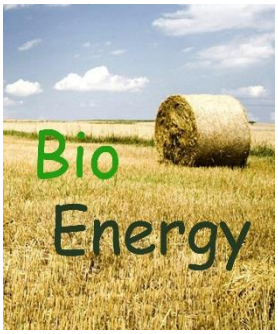

Bio-Energy

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Product: **Biogas Digester**
Project: **Generation of Biogas Using Thermophilic Reaction**

India has the second largest biogas program in the world at rural and as well as urban levels. But still there is need to develop a sustainable renewable energy program on biogas for replacing petroleum products by utilization of biogas in the country. Also the alternative of using a methane gas generated from biodegradable waste has a low cost and its production can be constant, making it a viable solution for both rural and urban communities and also to improve the environmental issues that are currently being affected by the use of nonrenewable resources.
Traditionally biogas is produced using cow dung and organic waste that is by mesophilic reaction. The time taken to generate biogas is generally 30-45 days and the quality of the gas is also not good i.e. in terms of the quantity of methane produced. The aim of our project is to design a system to produce biogas in minimum number of days by using rice straw which is used due to its high calorific value, manure and agricultural waste.
The digester operates is the thermophilic temperature range at an optimum temperature of55 degree C. We will use heat from a readily available heat source to enable a temperature of55 degree C in the digester. The humidity in the digester will be monitored and controlled to ensure that the feed dry up.

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