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Non-edible Oil Seed Cakes as the Potential Source for Biogas Production: A Review

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Abstract: *The increasing consumption of energy results in decrease of fossil fuel stock as well as increasing environmental problem which directly putting a great pressure on the society to find renewable alternatives. Biogas can be considered as one of the best non-conventional source of energy which is helpful to reduce this problem. India is endowed with a huge amount of agricultural biomass which can be used for biogas production, thus meeting the energy demand. Among the locally available biomass de-oiled oil seed cakes can be considered as a potential source for biogas production. Total current production of oil cake is above 25 million tons per annum while the export is over 4.3 million tons per annum. Edible oil seed cakes have a high nutritional value with protein content ranging from 15 to 50 % and are mainly used as animal feeds. On the other hand the non-edible oil cakes in spite of having high nutrient content cannot be used as animal feed due to the presence of toxic components in them and are getting wasted. However, it is best suitable for biogas production as it contains a good amount of protein and carbohydrate. Attempts were being taken to produce biogas from these non-edible oil cakes considering different factors like carbon to nitrogen ration, cow dung to oilcake mixing ratio, total solid etc. This review paper presents the works done in the field of biogas production from non-edible oils seed cakes.*