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Bio-chemical conversion of food waste to feed stock

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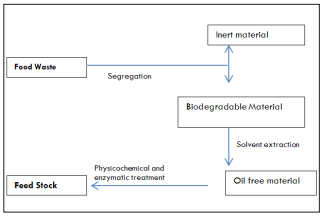

In fermentation industries, a major operating expense is contributed by feed stock cost. Despite having required stock of sugars, in major part of world, food waste is considered as waste. Food waste contains C6, C5 and other fermentable sugars and in addition, has assimilable nitrogen, plenty of vitamins and growth factors. Developing countries conventionally opt for biomethanation as it is simple and easy to implement. In view of potentiality and energy richness of food waste, output in the form of methane gas is not justified. Food waste if not treated properly, makes nuisance and eventually efforts are made to get rid of it. Day by day, the cost of feed stock in fermentation industry is increasing and overall profitability to owner remains challenging. Hence, converting the waste in to valuable feed stock is the best option that takes care of nuisance and also gives potential feed stock that can be used as starting raw material for fermentation. The process, we developed involves solvent extraction to remove fats and oil, physicochemical and enzymatic treatment to convert complex carbohydrates into free sugars. The product is further concentrated to improve the keeping quality and transportation. All over world, the food waste is generated at each village, town and city. Collection, segregation and treatment have tremendous potential to generate employment at organized, non-organized, technical and non-technical sectors. In due course of time, food waste to feed stock will become one of the major industry sectors that will supply feed stock to different fermentation industries and also will be recognized as ecofriendly, environmentally sustainable chain of industries. Treatment cost could be governing factor and need to be comparable with conventional feed stock.

Biography

Ajaykumar Soni has over 25 year's experience in fermentation process development and has expertise in ethanol fermentation. His passion is to develop environmental friendly, energy efficient and cost effective process from waste. He has vast experience of process development from lab scale to commercial plant scale and command on process plant trouble shooting in the field of ethanol fermentation. He is Master in Microbiology and is working with Praj Industries Limited, Pune, India, as Associate Vice President. He is also associated with SP Pune University, Pune, India and pursuing Masters in Technology integrated with PhD.

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