



Bioresource Technology

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Review

Valorization of agricultural waste for biogas based circular economy in India: A research outlook

Rimika Kapoor ^{a, 1}, Pooja Ghosh ^{a, 1}, Madan Kumar ^a, Subhanjan Sengupta ^b, Asmita Gupta ^c, Smita S. Kumar ^{a, e}, Vandit Vijay ^a, Vivek Kumar ^a, Virendra Kumar Vijay ^a, Deepak Pant ^d  

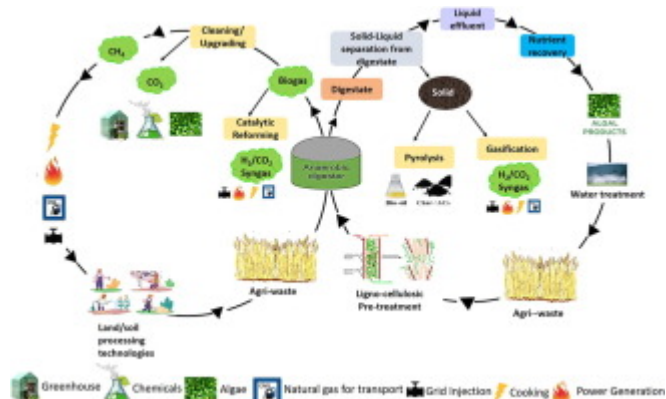
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Highlights

- Need for agri-waste derived biogas based circular economy has been discussed.
- Anaerobic digestion is a promising technology for agri-waste valorisation in India.
- Valorization of products of anaerobic digestion for circular economy has been discussed.
- Barriers in supply chain and technical knowledge impede growth of circular economy.
- Requirement of efficient implementation of policy and regulatory framework exists.

Agri-waste to biogas based circular economy requires an integration of agri-waste management, biogas production and utilization and policy support. This paper comprehensively discusses the potential of biogas production from agricultural waste, its upgradation and utilization along with the government initiatives, policy regulations. In addition, barriers that impede the development of an efficient agri-waste to biogas based circular economy, and the future research opportunities to meet the growing needs for agri-waste management, energy production and climate change mitigation are discussed.

Graphical abstract



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Keywords

Agricultural waste; Anaerobic digestion; Biogas upgradation; Bio-methane; Circular economy

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¹ Rimika Kapoor and Pooja Ghosh have equal contribution.

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