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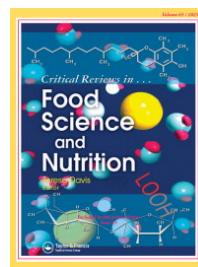
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Vegetable Waste Treatment: Comparison and Critical Presentation of Methodologies

Ioannis S. Arvanitoyannis & Theodoros H. Varzakas

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Abstract

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Vegetable industries have been considered responsible for a great amount of pollution; hence, there has been a strong need for the optimization of vegetable waste treatment systems. The currently employed systems are numerous and fall in the following large categories; thermal processes, evaporation, membrane processes, anaerobic digestion, anaerobic co-digestion, biodiesel spraying, combustion, transesterification, coagulation, and composting. Respective methodologies in conjunction with waste treatment methods were presented per waste treatment method.

The comparative presentation of the various vegetable waste treatment methodologies showed that though anaerobic digestion stands for the most environmentally friendly

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method because of its low cost and high effectiveness. Biogas production appears to be another promising and energy effective waste treatment method. On the other hand, methods like distillation and ozonation (high cost) and electrolysis (experimental level) have not been employed in the field. Finally, new waste management technologies have been described.

Keywords:

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