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THERMOPHILIC COMPOSTING PERFORMANCE OF PIG MANURE SPIKED WITH CARBADOX

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Abstract

Carbadox is a veterinary antibiotic and widely used in livestock production as feed additives. Carbadox and its metabolites have the potential of provoking a tumor-inducing mutation. In this study, the influence of carbadox addition on composting performance and its removal during thermophilic composting were investigated. The results showed that the carbadox addition slightly influenced pH variation and C/N ratio, and also improved the decomposition of organic matter. However, XRD analysis indicated that carbadox addition did not affect mineralization. Carbadox removal ranged from 75.8-79.4 % after 26 days of composting, and the half-time of carbadox was 9.12-9.37 days, suggesting that composting provides an option for the treatment of animal manure with carbadox contamination.

Key words: carbadox, mineralization, thermophilic composting

Received: March, 2016; Revised final: September, 2016; Accepted: October, 2016

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