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The effectiveness of co-digestion of sewage sludge and phytogenic waste

Galitskaya P., Zvereva P., Selivanovskaya S.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The authors explore the effect of the composition of mixtures of sewage sludge and phytogenic waste, their preliminary inoculation with a methanogenic community and the length of the process on biogas release in anaerobic co-digestion in thermophilic conditions. The study determines the effect of co-digestion products on the soil microbial community, as well as biometric parameters of the oat plants (*Avena sativa* L.). The authors demonstrate the principal possibility of co-digestion of the wastes. In terms of biogas release, the most preferable is the mixture of sewage sludge and maize silage. This mixture's co-digestion products possess fertilizing qualities. © IDOSI Publications, 2014.

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Keywords

Anaerobic co-digestion, Biogas, Non-traditional fertilizers, Organic waste