Daeseung Kyung et al., Int J Waste Resour 2016, 6:3(Suppl)
http://dx.doi.org/10.4172/2252-5211.C1.002

Development of zero food waste system

Daeseung Kyung, Jeong-Ik Oh and **Sungsoo Kim**
Korea Land & Housing Corporation, South Korea

Recently, reduction and recycling of food waste is emerging as an important environmental issue worldwide. Due to the improved living standards and heightened environmental awareness of people, the demand for food waste management system has been increased. In this study, we developed the zero food waste system (processing capacity: 100 kg/d) which can efficiently treat the food waste via fermentation and extinction with wood bio-chip and finally convert it as compost at 30~40°C for 24 hr. The system is composed of input entrance, inside screen and exhaust pipe, etc., with RFID (Radio Frequency Identification) technology. We tested the performance of zero food waste system for 220 days. As a result, weight reduction of food waste was more than 90% and electricity consumption was 6.2 kWh/d on average. In addition, condition of by-product was good enough to be used as compost (i.e., pH: 7.5~8.5, water content: 30~40%, organic matter content: 80~85%, salinity: 0.4~0.5%, and ATP: 600~700 nmol/L). Therefore, it is expected that the developed system could significantly contribute to the reduction and recycling of food waste.

Biography

Daeseung Kyung has completed his PhD from Korea Advanced Institute of Science & Technology (KAIST) and Post-doctoral studies from the same university. He is a promising Young Researcher in the field of Environmental Science & Engineering. He has published more than 20 papers in reputed journals and has been working as an Associate Researcher in Korea Land & Housing Institute.

dkyung@lh.or.kr

Notes: