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## Application of zero food waste system to residential complex

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Recently, Korea government has been actively promoting the reduction and recycling of food waste. They have imposed a nationwide pay-per-expanding of food waste (2012) and also placed a ban on the ocean dumping of food waste (2013). Therefore, it is necessary to develop efficient and comfortable food waste management system within the residential complex. Korea Land & Housing Institute has developed the zero food waste system that can efficiently treat the food waste via fermentation and extinction with wood bio-chip and finally convert it as compost at 30~40 in 24 hr. In this study, we applied the developed system to four residential complexes as a case study: (1) Dongcheon Smart Town (32 households), located in Suji-gu, Yongin, Korea, (2) Yuseong Songlim (861 households), located in Yuseong-gu, Daejeon, Korea, (3) Gangnam Suseo (2,650 households), located in Gangnam-gu, Seoul, Korea, and (4) Bonaire Village (634 households), located in Danwon-gu, Ansan, Korea. Education and training for the utilization of the system has continued for resident after the opening ceremony. In addition, questionnaire survey for resident and consultation with local government have progressed to improve the performance of the developed system. As a result of operating for 5 months, reduction rate of food waste has been more than 90% on average and by-product of the system has been properly used for gardening in the complexes. Based on the successful examples, the system will spread throughout Korea in the near future. Ultimately, it is expected that the system could enhance the quality of life and develop the national economy.

### 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.

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