

Recycling and reuse of kitchen waste for sustainable agriculture and as renewable energy in north-eastern Bangladesh

Shaikh Tanveer Hossain¹, Md Jashim Uddin² and Hideki Sugimoto³

¹Friends in Village Development Bangladesh, Bangladesh (FIVDB), Bangladesh

²Department of Soil, Water and Environment, University of Dhaka, Bangladesh

³Faculty of Agriculture, Ehime University, Matsuyama-shi, Japan

Unbalanced use of inorganic nutrients is the main cause for stagnation or declining crop productivity; this also causes health hazards in different forms. Usually huge quantities of vegetables, fishes, meats, and bones remain unutilized or thrown away as wastes in daily household affairs. However, kitchen wastes can also be used in productive manners. The ways and means of this endeavor has been addressed in this communication. The kitchen-waste based organic fertilizer has been developed by digging pits and placing the wastes on a layer of soil, topped by a layer of plant growth-promoting microbes. Almost 25% of compost was harvested by this manner in small scale in Sylhet division (North-Eastern Bangladesh) under the auspicious of livelihood enhancement program. The main objectives were achieved by converting waste into resource, finding an alternative nutrient source for agricultural production, improving soil health and converting recycle elements to natural resources. Also, organic agriculture induced significant reduction of greenhouse gas emissions. At present, we are planning to produce consumable energy from kitchen wastes. Preliminary studies inspire optimism about their commercial usage, entrepreneurship for youths and improvement of environment. Finally, it is assuming that there are huge scope of application of kitchen wastes under the integrated solid waste management (ISWM) programs with its 4 R's principle i.e. reduce, reuse, recycle and recovery of the waste with collection from both rural and urban areas for effective use for soil fertility and power energy development as a potential renewable energy source.

Biography

Tanveer is a Sustainable agriculture advisor of Friends In Village Development Bangladesh and visiting scientist of Laboratory of Crop Science, Faculty of Agriculture, Ehime University, Japan. Earlier he was scientist of Bangladesh Rice Research Institute. His is pioneer of integrated rice-duck farming technology and organic vegetable production in sack method in Bangladesh. He has been awarded the grand prize of 'Organic Farming Innovation Award (OFIA)' from International Federation of Organic Agriculture Movements (IFOAM) and Rural Development Administration (RDA), South Korea in September 2011. Tanveer holds a Ph.D. in Agriculture from Ehime University, Japan in 2008.

tanveer107@yahoo.com