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Compost in Growing Vegetables: an Effort in Reducing Organic Waste Disposal into the River

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Abstract

Citarum is the longest river in West Java Province, Indonesia, heavily polluted by waste from nearby activities, such as household waste. The community dumps organic and inorganic waste into the Citarum River every day. Based on the data from the local government in Karawang Regency, West Java Province, the total waste disposed of was about 900 tons per day with the estimation of 60 % of organic waste from nearby activities. This condition is one of the causes of the overflowing of the Citarum River during the rainy season and causing a flood. Many actions had been taken due to reducing organic waste. Organic waste compost has been developed for the surrounding community along the river bank. This project aims to: train people to reduce the organic waste dumping to the river; transform the waste into a valuable product such as compost; test the productivity of the compost as a growing media for vegetables. Twenty-five participants have joined the compost training which only eight of them continued to the planting experiment. The aerobic composting was conducted using microbes. After composting organic waste from the settlement area, the compost was put into a polybag with a diameter of 30 cm. The vegetable seed was planted inside the polybag (compost media) and placed in the participant's yard. The result showed that *Ipomea reptans* Poir (kangkong), *Brassica juncea* subsp. *integrifolia* var. *crispifolia* (green mustard) and *Brassica rapa* subsp. *Chinensis* (bok choi) crop was harvested in only a month after first planting and repeated monthly. In the early 2 two months, total productivity was 34 kgs of kangkong, 16.5 kgs of green mustard, and 18.2 kgs of bok choi. In general, the products were used for daily consumption and local direct selling. The estimated prices were: IDR50,000/kg for kangkong; IDR15,000/kg for green mustard; and IDR³0,000/kg for bok choi. The revenue from the sale was used to buy seeds for the following plants. First, form the evaluation; this project requires a community organisation in charge of management on a large scale. The organisation also needs capacity building to empower the sustainability of the project.

Keywords: Compost, organic waste, polybag plantation, vegetables, waste reduction