



P 12 Potential utilization of pelletized compost developed from different waste materials as a slow releasing fertilizer

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Application of compost is an effective method for improving the physical and chemical conditions of a soil. The nutrients may loss from conventional compost due to erosion. An effective solution would be the application of densification technology with molding of manure compost into pellets. Pelletized compost is relatively a new concept that has a nutrient slow-releasing ability. The objective of this study was to investigate the effect of pelletized fertilizer on the growth and development of *Ipomea aquatica*. Compost was produced from different waste materials such as straw, cow dung and poultry litter. After the maturity stage, sieved compost was mixed with binders (clay and oil palm meal effluent). Domestic molding machine coupled to a 12 horse-power tractor was used for densification, and three types of pellets were produced. The pH values of pelletized compost with optimum moisture, with optimum clay binder and with oil palm meal effluent binder were 6.5, 6.5 and 6.9, respectively. The EC values of the above pellets were 1375, 1255, and 1781 $\mu\text{s cm}^{-1}$, respectively. The percentages of N in the above pellets were 1.46, 1.02 and 1.25, respectively, where as C% of them were 26.65, 20.81 and 25.32, respectively. Seven treatments were used with five replicates in the experiment to determine the effect of different formulations on *Ipomea aquatica*. A pot experiment was conducted in a greenhouse by using completely randomized design (CRD) as the experimental layout. During the first and second harvest from *Ipomea aquatica* grown in developed pelletized compost were significantly lower than the other treatments. However, in the third harvest from *Ipomea aquatica* grown in developed pelletized compost was significantly higher than that of chemical fertilizer control, probably due to slow nutrient releasing ability of compost pellets.

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