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The Effects of Cow Manure Treated by Fruit Beetle Larvae, Waxworms and Tiger Worms on Plant Growth in Relation to Its Use as Potting Compost

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Abstract : Dairy industry is flourishing in world to provide milk and milk products to local population. Besides milk products, dairy industries also generate a substantial amount of cow manure that significantly affects the environment. Moreover, heat produced during the decomposition of the cow manure adversely affects the crop germination. Different companies are producing vermicompost using different species of worms/larvae to overcome the harmful effects using fresh manure. Tiger worm treatment enhanced plant growth, especially in the compost-manure ratio (75% compost, 25% cow manure), followed by a ratio of 50% compost, 50% cow manure. Results also indicated that plant growth in Waxworm treated manure was weak as compared to plant growth in compost treated with Fruit Beetle (FB), Waxworms (WW), and Control (C) especially in the compost (25% compost, 75% cow manure) and 100% cow manure where there was no growth at all. Freshplant weight, fresh leaf weight and fresh root weight were significantly higher in the compost treated with Tiger worms in (75% compost, 25% cow manure); no evidence was seen for any significant differences in the dry root weight measurement between FB, Tiger worms (TW), WW, Control (C) in all composts. TW produced the best product, especially at the compost ratio of 75% compost, 25% cow manure followed by 50% compost, 50% cow manure.

Keywords : fruit beetle, tiger worms, waxworms, control
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