



Efficacy Leaf Litters as Substrate on Reproductive Potential of Epigeic Earthworm *Eudrilus eugeniae*

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Abstract: The study was aimed to analyze the vermicomposting ability and reproductive potential of *Eudrilus eugeniae* in different leaf litters such as *Arthrocarpus heterophyllus*, *Mangifera indica*, *Coffea arabica*, *Psidium guajava*, *Morus alba*, *Erythrina veriegata*, *Gliricidia sepia*, *Lawsonia inermis*, *Musa paradisiaca*, *Cinnamon zeylanicum* and *Ficus religiosa* with native Vechur breed cow dung as the reference sample. *E. eugeniae* showed highest reproductive potential in *F. religiosa*, *C. arabica*, *M. alba*, *M. indica*, *A. heterophyllus*, *P. guajava* when compared to control samples. Whereas, lowest reproductive potential observed in culture medium with *G. sepia*, *M. paradisiaca*, *C. zeylanicum*, *L. inermis*. The phytochemical components of leaf litters can directly effects the microbial activities during decomposition process. The results, indicates that leaf litters can be converted into value added manure for sustainable soil fertility management program.

Keywords: *Eudrilus eugeniae*, Leaf litters, Reproductive potential, Vermicomposting
