EVALUATION OF THE EFFICACY OF COMPOST EXTRACTS INCORPORATED WITH INSECTICIDAL PLANT MATERIALS

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During composting process vital insecticidal chemical compounds can easily be extracted from insecticidal plants. The Aqueous extract of these compost contain plant nutrient as well as insecticidal substances. Different proportions of three botanicals, *Tithonia diversifolia*, *Lantana camara*, *Ocimum gratisimum* were incorporated to a basic compost to enhance the insecticidal properties of compost. At the rates of 30% *Tithonia diversifolia* (T1), 30% *Ocimum gratisimum* (T2), 30% *Lantana camara* (T3), 15% *Lantana camara* + 15% *Tithonia diversifolia* (T4), 15% *Lantana camara* + 15% *Ocimum gratisimum* (T5), 15% *Tithonia diversifolia* +15% *Ocimum gratisimum* (T6), 10% *Tithonia diversifolia* + 10% *Lantana camara* + 10% *Ocimum gratisimum* (T7) incorporated compost mixtures and basic compost (T8), were submerge in water at 1:3 ratio for 48 hours to prepare the compost extracts. The treatments were bioassays with *Aphis craccivora* (Cowpea aphids) and LC_{70} values were calculated using log probit mortality curves. Undiluted compost extract gave 80-90% mortality in all treatments except in T5 (65% mortality) at the 48 hours after application. Mortality decreases as the extracts were diluted with water at different concentration. The treatments were tested against aphids, mealy bugs, thrips and plant hoppers in brinjal at the field level. Brinjal aphids, mealy bugs, thrips were significantly ($p>0.05$) reduced in treated plants compared to the control. Aphid population was increased by 13% in untreated control after the 48 hours observation period. Highest reduction in aphid population was observed in T8, T2 and T6 treatments. Mealy bug population was significantly ($p> 0.05$) reduced in T1. All treatments incorporated with *Tithonia diversifolia* found to be superior over the other treatments in the control of observed pests of brinjal. There were no significant effects of treatments on the natural enemies in the experimental field.

Key words: Compost extract, Insect pest, Botanicals, Natural enemies