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EFFECTS OF PROFENOPHOS AND NEEM EXTRACTS ON *TRICHOGRAMMA CHILONIS* AND *TRICHOGRAMMA ACHAE*, EGG PARASITOIDS OF *TRICHOPLUSIA NI*

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Use of *Trichogramma chilonis* and *Trichogramma achae* has been proposed to manage *Trichoplusia ni* and other caterpillar species in cabbage through augmentation and release. However, use of insecticide is inevitable due to frequent infestation of pest species. For the successful use of *T. chilonis* and *T. achae,* it is necessary to understand how these insects respond to the insecticides. Along with this objective, effects of neem extracts (81%) and profenophos (500g/l EC) on parasitoids were examined in the laboratory. The direct effect of insecticides on different growth stages of the parasitoids and the indirect effect or effects of insecticide residues on the parasitoids were studied. Of the parasitoids who survived the insecticide treatments, longevity and sex ratio were examined. Residue effect of the insecticides was evaluated 0, 5, 15 and 25 days after spraying. Insecticides were applied as per label instruction. Profenophos significantly affected all the stages of the parasitoid including egg, larval, pupal and adult stages ($F=21899$; $df=2, 87$; $p<0.05$) of *T. chilonis* with reference to mortality. Similarly, mortality was significant when egg, larva, pupa and adults of *T. achae* were treated with profenphos ($F=20,636$; $df=2, 87$; $p<0.05$). Mortalities between neem and control were not significant among the growth stages of both species. Longevity and sex ratio of both *T. chilonis* and *T. achae* when treated at different growth stages did not vary significantly between neem extract treatment and control. Effect of treatments on the parasitism percentage of both species differed significantly over the time ($F=1327$, $df=1, 216$; $p<0.05$). Results revealed that profenophos showed strong negative effect on the performance of *Trichogramma chilonis* and *Trichogramma achae* than neem extract and *Trichogramma chilonis* is more suitable as a biocontrol agent than *Trichogramma achae.*