ORGANOPHOSPHORUS PESTICIDES INFLECTED IMPAIRMENTS IN THE MIDGUT HISTO-ARCHITECTURE OF NAIAD OF TRITHEMIS AURORA (BURM.) (ODONATA : LIBELLULIDAE)

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ABSTRACT – A continuous forty hours of treatment of last instar naiad of T. aurora under LC$_{50}$ concentration, $5.12 \times 10^{-7}$ and $7.60 \times 10^{-8}$ ppm of chlorpyriphos and quinalphos respectively has proved toxic and induced histopathological derangements in various tissues of midgut. The mesenteron has observed to be prone to both the pesticides. The chlorpyriphos separated the epithelial folds and widen the inter fold space up to the basement membrane. The quinalphos penetrated inside the epithelial folds and damaged cellular mass. Both the pesticides induced the movement of cytoplasmic contents at various degrees towards the apical end of the epithelial folds. This movement presumed to be the genesis of intense vacuolation at the basal ends of all the epithelial cells. The continuous pressure of the internal cellular contents and weakened cell boundaries have caused the violent exclusion of cell contents. The nuclear membrane at many places damaged by chlorpyriphos and severely affected by quinalphos.

Key words : Trithemis aurora, organophosphorus, naiads.