

Studies of the Effects of Imidacloprid and Deltamethrin Insecticides on the Biology of *Pieris brassicae* (Linn.) on Cabbage

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Abstract—The present investigation was conducted during Rabi season of 2011 to see the effect of imidacloprid and deltamethrin insecticides on the biology of *Pieris brassicae* (Linn.) on cabbage at experimental field of the Department of Plant Protection, Faculty of Agricultural Sciences, Aligarh Muslim University, Aligarh. The larvae of *Pieris brassicae* were collected from cabbage field in the month of January and February 2012. They were kept in jars measuring 25 x15 cm and provided fresh cabbage leaves as food for larvae. These jars were kept in B.O.D chamber at 24.5 °C and 70±10 per cent relative humidity. Fresh cabbage leaves were dipped in 0.05 per cent aqueous solution of imidacloprid and deltamethrin and dried at room temperature by keeping in the experimental jars. Fifteen third instar larvae in a batch of five were allowed to feed on them for 24 hours. Survivorship and expectancy of the life was greatest in the beginning of the age and decreased gradually with the advancement of the age in the all treatment including control. The expectancy was minimum (17.18) when *P. brassicae* was treated with imidacloprid while maximum in the untreated individuals (25.83). The mortality of *P. brassicae* was significantly high in the early instars as compared to late instars in both treated and untreated individuals.

Keywords : Insecticides, *Pieris brassicae* (Linn.), Imidacloprid, Deltamethrin.