

RESEARCH ARTICLE

# Role of bird predators in the management of *Helicoverpa armigera* Hubnr

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## ABSTRACT

Studies on role of bird predators in the management of *Helicoverpa armigera*, were carried out at Mechanized Agriculture Farm, Ummedganj, Kota during the two consecutive years (2004-05 and 2005-06). The net installed at 1 m height above ground level on the gram crop facilitated the movement of *H. armigera* moths across the net. The bird activity (predation) was started at the time of pest appearance (third week of January) and continued till harvesting of the crop in both the years. During both the experimentation years, total number of larvae ( $G_1$ ,  $G_2$  and  $G_3$ ) was observed minimum in  $T_6$  (60 cm row distance + T shape perch) as compared to control / netted plot  $T_8$  at the time of pod formation, mainly due to the bird predation in  $T_6$ . Two sprays of endosulfan @ 0.07 per cent significantly reduced the larval number but yield was higher only in the treatment  $T_4$  (60 cm row distance + insecticide). The maximum per cent larval reduction was observed in the period  $P_{11}$  (third week of March) in the treatment  $T_6$ . However, it was statistically at par with  $T_4$ . Slightly more inter row distance *i.e.* 60 cm improved the efficiency of predatory birds. In bird protected (netted) area, pod damage was always higher and hence the yield was very poor compared to the open area ( $T_1$  to  $T_6$ ), where, birds controlled the pest. Installation of T perch also increased the searching efficiency of predatory birds as seen in  $T_6$ . The activity of predatory birds was comparatively less during the morning hours (7 to 8.30 am) compared to evening hours (4 to 6.00 pm) and no activity was observed in between. Due to the bird preference to forage in 60 cm spaced crop, larval population was significantly less compared to 45 cm spaced area. Five important bird predators *viz.*, cattle egret, house sparrow, common myna, bank myna and black drongo were recorded in treatment  $T_1$  to  $T_6$  during investigation period.

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