

ABSTRACT

The current study was aimed to evaluate the oviposition response of *Aedes aegypti* to ovitraps loaded with control (tap water / hay infusion) and six different treatments of *Bti*, Buprofezin and integration of *Bti* + Buprofezin (10,1ppm). The study was carried out in two localities (Chauburgi and Manawan) of Lahore, Province Punjab, Pakistan from August-October 2009. Each locality was divided in two blocks (control versus treatment). Total 24 houses were selected in these blocks of each locality. Twelve houses served as control block and the other twelve as treated block. Each house received a pair of ovitrap which contain various concentrations of *Bti*, buprofezin and integration of *Bti* + Buprofezin (1:1) in water and 10 % hay infusion. In control block, same number of ovitraps containing only tap water / 10 % hay infusion were installed in 12 houses. These control and treated ovitraps were observed weekly for oviposition over three months. The results parameters were observed in the form of ovitrap positive index (OPI) i.e percentage positive ovitraps and eggs density index (EDI) i.e average number of eggs / paddle. The results indicated decrease in no of eggs harvested in all treated groups as compared to their respective control in both localities. The average no of eggs laid / paddle (EDI) was 17 and 28 in control (tap water / 10%hay infusion) as compared to 7 and 15 in treatments at Chauburgi and Manawan respectively. The maximum OPI observed was 50 and 66% as compared to 40 and 58% in tap water / hay infusion at Chauburgi and Manawan respectively. Total 946 and 1360 eggs of *Aedes aegypti* were harvested from 12 ovitraps (144 sites) of control with tap water and 10%hay infusion in Chauburgi as compared to 2079 and 2972 eggs were harvested from Manawan in the same controls. Average eggs density index was higher 23 and 19.3 in control with 10% hay infusion and tap water in Manawan as compared to 16.8 and 14.6 in Chauburgi. In conclusion 10% hay infusion act as attractant for oviposition. With respect to number of eggs harvested between two selected localities 2.19 times more eggs were observed in control and treatments at Manawan as compared to Chauburgi. No live larvae, pupae and adults were

observed in all lethal ovitraps indicating it is an effective tool to control immature stages of dengue vectors. Overall lethal ovitraps could provide an inexpensive, simple and environmentally benign method to control dengue vectors in Pakistan. Further studies in other localities of Lahore are recommended.