

ABSTRACT

Field evaluation of lethal ovitraps (LOS) against dengue vectors was carried out in two different municipalities; Samanabad and Mughalpura, in Lahore, province Punjab, Pakistan from August - October 2009. Each municipality was divided in two blocks (control versus treatment). In treatment block, 18 randomly selected houses received 36 LOs, with various concentrations of Bti, buprofezin and integration of Bti+buprofezin (1:1) in water and 10 % hay infusion. In control block, same number of houses received (36) ovitraps containing only tap water /10 % hay infusion. In 15 collections, total 10,152 eggs of *Aedes aegypti* were harvested from 144 ovitraps. Among these, 5,351 eggs were collected from treatment blocks and 4,801 from control blocks of both municipalities. These results indicated that different treatments did not affect oviposition rate compared with control in tap water / 10 % hay infusion. However, hay infusion yielded more eggs (6,548) as compared to tap water (3,604), indicating that ovitraps with hay infusion were 1.82 times more attractive for oviposition than that of tap water. Ovitrap positive index (OPI) was higher in 10 % hay infusion as compared with tap water. Moreover, there was no considerable difference in egg density index (EDI) in tap water compared with 10 % hay infusion in both localities. Collected eggs were reared up to adults in laboratory to evaluate efficacy of different treatments. Effect of Lethal ovitraps treated with different concentrations of Bti indicated that 100 and 10 ppm completely inhibit pupal formation while against 1 ppm 41 and 60 % pupae were formed in Samanabad and Mughalpura respectively. LOs treated with buprofezin indicated that different concentrations of buprofezin were more effective in inhibiting the pupae - adults emergence as compared to Bti where affect was more on larval stage. Integration of Bti+buprofezin (1:1) in hay infusion was highly effective in reducing pupae formation and inhibiting adults emergence. There was complete inhibition of adult emergence against all concentrations (100-1 ppm) in integrated lethal ovitraps, indicating the most effective tool for controlling *Aedes* population in natural condition.