

Determination of appropriate positioning of the ovitraps for dengue mosquito surveillance

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Three months ovitrap survey was conducted to assess the suitable position in placing the ovitraps for dengue vector mosquito surveillance and this study was initiated due to loss of valuable data from our previous studies as a result of physical damage of the ground kept ovitraps. Thirty four households in the Ragama Medical Officer of Health area in Gampaha District were selected to conduct the ovitrap survey during the period of May to July, 2015 to select the most appropriate positioning of the ovitrap. The conventional black plastic ovitraps (3.2x 2.7 cm) were used in this purpose to collect aquatic stages of *Aedes* mosquitoes while placing plywood paddle (4 x 0.5 cm) over the upper rim of each coded ovitrap. A total of 136 ovitraps were used in the study site providing four ovitraps (2 each indoor & outdoor) for each house while one of the ovitraps of indoor and outdoor being hung and other being kept on the ground. In positioning ovitraps, the outdoor ones were kept 3m away from the house while leaving indoor ovitraps in the living room in close proximity to racks/hanging clothes or partially shaded places. Following collection of samples at each week, ovitraps were washed thoroughly, refilled with new water and a new paddle, and corresponding data were recorded and analyzed. These analyses revealed that number of larvae and the number of *Aedes* mosquito eggs present in the two different ovitrap positions (Ground kept vs Hung) were not significantly different; in spite of significant difference (P=0.001) between the outside and inside placements. Further, significantly higher values were observed for both number of mosquito eggs and larvae present in each ovitrap kept outside (60 and 13 respectively) than those placed inside (32 and 3 respectively). Furthermore, slightly higher values were observed for hung ovitraps (49 and 9 respectively) than ones kept on the ground (43 and 7 respectively). Finally, ovitrap placed above the ground level was selected in continuing the routine ovitrap survey, as there was considerable reduction of mechanical damage to the latter thus facilitating continuous data collection.

Key words: Aedes mosquito, ovitrap

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