



Dengue and dengue haemorrhagic fever is a disease of public health importance in many tropical countries including Sri Lanka. Dengue viruses are transmitted to humans by *Aedes aegypti* and *Ae. albopictus*. Both these species of mosquitoes breed in man made and natural container habitats. Rubber tyres which are the preferred breeding places of the vector species, are found in large numbers in almost all commercial establishments.

The aim of this study is to investigate the degree of contribution of these establishments in the spread of dengue/ dengue haemorrhagic fever. All commercial establishments in Colombo and 40 other suburban areas in the Western Province were surveyed for dengue vector breeding sites during the period from September to December 1998. A total of 1304 commercial establishments were examined during the survey and 89% of them constituted garages, tyre repair shops, vehicle service stations and tyre rebuilding and sales centres. The balance included bus depots, various types of work shops such as pottery, cement works, antique shops, plant nurseries, filling stations and a few private and government establishments.

The dengue vector breeding was observed in 80.06% of these premises. A total of 76620 breeding places were examined and 62% of them were tyres. Others were barrels discarded receptacles, leaf axils and bamboo stumps etc. Out of 4730 tyres examined, 60% were positive for *Aedes aegypti* vectors. In most of these establishments, tyres were found in abundance varying from fifty to as many as thousands.

In the city of Colombo, 62.5% of the were inhabited by *Ae. Aegypti* and 20.4% by *Ae. Albopictus*. Mixed breeding was also observed in 16.1% tyres. In the suburban areas close to the city of Colombo, *Ae. Aegypti* is still the predominant species inhabiting about 40%- 50% of the tyres. In areas situated further away from the city of Colombo, *Ae. Albopictus* was the predominant species breeding exclusively in about 50% of the tyres while for *Ae. Aegypti*, breeding was limited to 13 % and the balance 37% showed mixed breeding.

The data gathered during the study revealed that the intensity of vector breeding in tyres was significantly high when compared with other container habitats, and it was also observed that the majority of commercial establishments were in possession of large numbers of tyres. Majority of commercial establishments were in possession of large numbers of tyres stacked outdoor, promoting heavy vector breeding. This was in contrast to other premises such as dwellings, therefore, it can be concluded that the commercial buildings harbouring tyres pose a serious threat to the breeding of dengue vectors as well in the spread of these vector species.