

**ABSTRACT****The Effectivity of The Combination *B. thuringiensis israelensis* and Predator *M. aspericornis* as Biological Control Agent Of *Aedes aegypti* Larvae in The Community**

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Control of dengue haemorrhagic fever (DHF) is conducted by eliminating chain of transmission. Presently there is no effective vaccine for the dengue virus. Control of DHF is focussed at the vector. The use of chemical insecticides for vector control has been conducted for some time. Frequent use of insecticides has caused resistance of the mosquito towards the insecticide. Themephos 1% has been used extensively and cause resistance of *Aedes aegypti* larvae in various areas. Presently alternative insecticides and vector control methods are sought. *Bacillus thuringiensis israelensis* in combination with the *Mesocyclops aspericornis* is used as an alternative method for controlling mosquito larvae. The aim of the study is to analyze the difference in effectivity of the combination *B. thuringiensis israelensis* and *M. aspericornis* in cisterns and water jars in the house.

The study was conducted in Januari until August 2003 in a DHF endemic area at Kupang Rengas, Kupang Village, Ambarawa subdistrict, Semarang regency, Central Java. The design of the study quasi experimental comparing before and after intervention using external difference groups. Purposive sampling was conducted. In the study two *B. thuringiensis israelensis* formulations e.g. *B. thuringiensis israelensis* (V) and *B. thuringiensis israelensis* (C) were used. The study compared *B. thuringiensis israelensis* (V), *B. thuringiensis israelensis* (C), *M. aspericornis* used individually with the combination *B. thuringiensis israelensis* (V) with *M. aspericornis* and *B. thuringiensis israelensis* (C) with *M. aspericornis*.

The result showed that the combination of *B. thuringiensis israelensis* (V) and *M. aspericornis* predator is effective to reduce *Ae. aegypti* larvae density until twelvth week i.e. 96,70 – 100% in cisterns and 96,56 – 100% in water jars respectively. The combination of *B. thuringiensis israelensis* (C) and *M. aspericornis* predator is effective to reduce *Ae. aegypti* larvae density until twelvth week i.e. 96,92 – 100% in cisterns and 97,28 – 100% in water jars respectively. The combination of *B. thuringiensis israelensis* and *M. aspericornis* both combined as well as used individually was evaluated based on reduction in the effectivity of the two combinations observed in cisterns as well as water jars.

Keywords : *B. thuringiensis israelensis*, predator *M. aspericornis*, *Ae. aegypti* larvae, effectivity