

ABSTRACT

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THE EFFECTIVENESS TEST OF SWAMP FISH (*Trichogaster trichopterus*) SIZE VARIATION IN EATING 3RD INSTAR *Aedes albopictus* LARVAE AS AN EFFORT TO CONTROL DENGUE FEVER

viii + 54 Pages + 13 Table + 8 Pictures + 4 Attachments

Dengue fever is one of the diseases that is often experienced in Indonesia and nowadays becoming the problem of public health. The cause of dengue fever disease is dengue virus brought by mosquito vector of Aedes sp. Such mosquitos can bring dengue virus after incubation period within eight up to ten days. After having incubation period, those viruses will be transmitted to healthy humankind by biting them. The safe effort of eradicating mosquito vector for humans and their environment is through the biologically eradication using predatory fish of mosquito larvae. The aim of this research is to know the eating ability of swamp fish (*Trichogaster trichopterus*) in several sizes.

The type of this research is analitical research using *Quasi Experimental* design and giving size variation of swamp fish (*Trichogaster trichopterus*) consisting of 3 cm, 4 cm, 5 cm with the negative control on the trial media of every jar containing one liter of water and mosquito larvae of the 3rd instar *Aedes albopictus* of 25 tails within an hour.

From the result of this research, it is known that the amount precentage of the 3rd instar *Aedes albopictus* larvae that is eaten by the 3 cm swamp fish is 80,8 %, the 4 cm swamp fish is 72%, and the 5 cm swamp fish is 64,8% which is done nine times replication. The results of the homogeneity of variance test show that the value = 0.000 is smaller than (alpha) so the data is said to be inhomogeneous. An alternative test using the kruskal wallis test was obtained that the $p = 0.000$ was smaller than $\alpha = 0.05$ so that there was a variation in the size of the swamp fish (*Trichogaster trichopterus*) in eating the third instar *Aedes albopictus* larvae.

The conclusion of this research is that the 3 cm swamp fish (*Trichogaster trichopterus*) can control the 3rd instar *Aedes albopictus* larvae so that can be the alternative to eradicate the disease vector of Dengue fever.

Key words : Dengue fever, swamp fish size variation, *Aedes albopictus* larvae
Literature : 27 literatures (1993-2020)