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ABSTRACT

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Effect of Lemongrass Leaf Infusion (Cymbopogon nardus) on the Death of Aedes aegypti Larvae

Dengue Hemorrhagic Fever (DHF) is an infectious disease caused by the dengue and spread by the mosquito vector of the genus Aedes with the main vector being Aedes aegypti. The aim of this research was to determine the effect of infusion of citronella leaves (Cymbopogon nardus) on the death of Ae. aegypti. The research was carried out with a true experimental design. The research sample was 625 third instar Aedes aegypti larvae, with each container containing 25 larvae and carried out 4 replication. The variable observed was the number of larval deaths every 10 minutes in first hour, 2, 4, 6, and 24 hours in the control group and in the intervention group with various concentration of 4%, 8%, 12%, 16%, and 20% infusion of citronella leaves. Data were analyzed using the One Way Anova test. The results of data analysis showed a significance value $<0,05$, which means there was a significant difference in the average larval mortality, indicating the effect of citronella leaf infusion (Cymbopogon nardus) on the mortality of third instar Aedes aegypti larvae. Observations showed that all larvae moved actively before being given the infusion of citronella leaves. After 24 hours of giving intervention with infusion of citronella leaves at concentration of 4%, 8%, 12%, 16%, and 20%, the number of the deaths were respectively respectively was 4% (21 larvae), 8% (41 larvae), 12% (52 larvae), 16% (60 larvae), 20% (72 larvae). The results of this study shows the effect of citronella leaves infusion on the death of Aedes aegypti larvae. The suggestions from this research is to innovate by creating a plant-based larvicide in a different form, utilizing lemongrass as a plant-based larvicide, and introducing a plant-based larvicide product.

Keywords : *infusion, Cymbopogon nardus, Aedes aegypti, Dengue Hemorrhagic Fever*

Literature : *2008 - 2022*