

ABSTRAK

PENGARUH BIOPESTISIDA CAMPURAN DAUN MENGGKUDU (*Morinda citrifolia*) DAN DAUN TEMBAKAU (*Nicotiana tabacum* L.) PADA KONSENTRASI BERBEDA TERHADAP MORTALITAS BELALANG KEMBARA (*Locusta migratoria*)

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Pengendalian hama selama ini dilakukan dengan menggunakan pestisida sintetik atau kimia. Namun jika dilihat dari dampak yang ditimbulkan ternyata berbahaya bagi tanaman, hewan non target bahkan manusia. Maka, perlu alternatif lain yang lebih ramah lingkungan dengan membuat biopestisida. Biopestisida dapat diartikan sebagai semua bahan hayati yang dapat digunakan untuk memusnahkan hama dan penyebab penyakit pada manusia, hewan dan tanaman. Bahan dasar dari biopestisida ialah daun mengkudu dan daun tembakau dikarenakan daun mengkudu dan daun tembakau memiliki senyawa kimia yang dapat dimanfaatkan sebagai biopestisida yaitu tanin pada daun mengkudu dan nikotin pada daun tembakau.

Tujuan dari penelitian ini ialah mengetahui pengaruh biopestisida berbahan dasar daun mengkudu dan daun tembakau terhadap kematian hama belalang serta pada konsentrasi berapa yang paling berpengaruh terhadap kematian hama belalang. Bahan yang digunakan ialah 300 gr daun mengkudu dan 300gr daun tembakau yang dicampurkan pada 600 ml air bersih. Setiap perlakuan dan kontrol dibuat 3 kali pengulangan. Biopestisida selanjutnya diuji selama 10 hari dengan cara disemprotkan pada hama belalang kembara untuk mengetahui tingkat kematian belalang sehabis disemprot. Selanjutnya hasil diuji menggunakan uji statistik dan dilakukan uji lanjut yaitu uji Tukey.

Berdasarkan uji statistik didapatkan hasil bahwa biopestisida berbahan dasar daun mengkudu dan daun tembakau berpengaruh terhadap kematian hama belalang kembara. Konsentrasi 30% yang paling berpengaruh pada kematian hama belalang kembara.

Kata kunci : biopestisida, ekstrak daun mengkudu, ekstrak daun tembakau, variasi konsentrasi, hama belalang kembara.

ABSTRACT

*THE INFLUENCE OF DIFFERENT MIXED BIOPESTICIDE CONCENTRATION OF NONI (*Morinda citrifolia*) AND TOBACCO (*Nicotiana tabacum* L.) LEAVES ON THE MORTALITY OF MIGRATORY LOCUST (*Locusta migratoria*)*

Pest control was mostly practiced by using of synthetic or chemical pesticide. However, the effect of that pesticide threatened plants, non-target animals, and even humans. Therefore, making biopesticide was believed to be a more-friendly pest control substitute for environment. Biopesticide was generally known as all substance used to eliminate pests and diseases of human, animal, as well as plant. The basic material of biopesticide was noni and tobacco leaves because they contain a chemical compound—tannin in noni leaf; and nicotine in tobacco leaf—that can be utilized as insecticide.

The research was aimed to discover the influence of biopesticide made from noni and tobacco leaves on migratory locust death and the result of different concentration treatment which could lead the locust to mortality. The materials were 300 grams of noni leaf and 300 grams of tobacco leaf mixed with 600 ml of pure water. Every treatment and control were consisted of 3 repetitions. After that, each different biopesticide concentration started from 10%, then 20% and later 30% was tested for 10 occasions by spraying it toward locusts to find out the level of locusts' death after being sprayed. Thereafter, the result would be examined using statistical test and a further test would be employed with Tukey Test.

Based on the statistical test, the result indicated that different biopesticide concentration which was made from noni and tobacco leaves could trigger the locusts' death. Also at the concentration of 30%, the effect on locusts' death was significant.

Keywords: biopesticide, noni leaf extract, tobacco leaf extract, concentrate variation, locust.