

ABSTRAK

UJI EFEKTIVITAS KOMBINASI EKSTRAK BROTOWALI, TEMBAKAU DAN DAUN SIRSAK DALAM PENGENDALIAN HAMA BELALANG KAYU (*Valanga nigricornis*)

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Pengendalian hama sampai dengan saat ini masih banyak menggunakan pestisida kimia atau sintetis. Jika dilihat dari dampak yang ditimbulkan pestisida sintetis sangat berbahaya bagi tanaman, hewan non target, lingkungan bahkan manusia. Sehingga perlu alternatif lain yang lebih ramah lingkungan dan tidak berbahaya salah satunya dengan menggunakan pestisida nabati. Tujuan dari penelitian ini adalah mengetahui pengaruh pestisida berbahan dasar brotowali, daun sirsak dan daun tembakau terhadap mortalitas hama belalang dan konsentrasi berapa yang paling berpengaruh terhadap mortalitas belalang. Brotowali, daun sirsak dan daun tembakau mengandung alkaloid, acetogenin dan nikotin yang bersifat toksik sehingga dapat dimanfaatkan sebagai pestisida.

Bahan yang digunakan ialah 1 kg brotowali, 1kg daun sirsak dan 1 kg daun tembakau yang dicampurkan pada 1 liter air. setiap perlakuan (35 ml, 45 ml, 60 ml, 75 ml) dan kontrol dibuat 4 kali pengulangan. Pestisida nabati kemudian diamati selama 24 jam dengan cara disemprotkan pada hama belalang dan makanannya untuk mengetahui tingkat mortalitas belalang setelah disemprot. Kemudian hasil pengamatan diuji menggunakan uji statistik menggunakan uji anova.

Berdasarkan uji statistik didapatkan hasil bahwa pestisida nabati berbahan dasar brotowali, daun sirsak dan daun tembakau berpengaruh terhadap mortalitas belalang. Konsentrasi 75 ml yang paling berpengaruh terhadap mortalitas belalang.

Kata kunci : pestisida nabati, ekstrak brotowali, ekstrak daun sirsak, ekstrak daun tembakau, belalang kayu.

ABSTRACT***THE EFFECTIVENESS TEST FROM THE COMBINATION OF BROTOWALI, TOBACCO, AND SAURSOP LEAVES EXTRACTS IN WOOD GRASSHOPPER PEST (*Valanga nigricornia*) CONTROL***

Pest control still uses many chemical or synthetic pesticides so far. In terms of the impact of synthetic pesticides, that kind of pesticide is very harmful for plants, non-target animals, environment, and even humans. Thus, there should be other alternatives which are more environmental-friendly and not harmful; one of them is organic pesticide. Organic pesticide is a material made of the mixture of organic ingredients processed and used to control pests. The basic ingredients of organic pesticides are brotowali stems, soursop leaves, and tobacco leaves. Brotowali contains alkaloids, soursop leaves contain acetogenin while tobacco leaves contain nicotine. These chemical compounds are toxic and can be used as pesticides.

The aims of this research are to find out the effect of pesticides made of brotowali, soursop leaves, and tobacco leaves on mortality of locusts and to find out the amount of concentration to give the biggest effect on the mortality of locust. The materials used are 1 kg of brotowali, 1 kg of soursop leaves, and 1 kg of tobacco leaves which are mixed with 1 liter of water. Every treatment and control is carried out for four times of repetition. The organic pesticides are then tested for 24 hours by spraying them to locusts and their foods to know the level of mortality after spraying. The result of the observation is tested using statistics test.

Based on the statistics test, it can be seen that organic pesticides made of brotowali, soursop leaves, and tobacco leaves affect the mortality of locusts. The concentration of 75 ml will affect most on the mortality of locusts.

Keywords: organic pesticides, brotowali extract, soursop leaves, tobacco leaves, wood locust