RINGKASAN

Padi merupakan tanaman pangan penting dan merupakan komoditas utama dalam menyokong pangan masyarakat di Indonesia. Budidaya tanaman padi terdapat beberapa kendala, antara lain serangan hama. Pengendalian hama tanaman padi yang biasa dilalukan oleh petani adalah penggunaan pestisida. Penggunaan pestisida yang berlebihan akan menimbulkan masalah, antara lain resujensi, resistensi, dan ledakan hama. Pestisida berdampak negatif terhadap lingkungan sehingga perlu dicari alternatif lain yang efektif, yaitu pengendalian hama secara terpadu (PHT). Salah satu pengendaliannya adalah pengunaan metabolit sekunder jamur entomopatogen. Metabolit sekunder menghasilkan beberapa zat serta enzim yang mempu menyebabkan mortalitas serangga target. Penelitian ini bertujuan mengetahui kemampuan campuran metabolit sekunder jamur entomopatogen isolat cipete, papringan, dan pasir kulon dalam mengendalikan intensitas serangan dan populasi hama walang sangit (*Leptocorisa oratorius*) dan populasi musuh alaminya.

Penelitian dilaksanakan di Laboratorium Perlindungan Tanaman Fakultas Pertanian Universitas Jenderal Soedirman dan sawah percobaan di Desa Pasir Kidul, Purwokerto Barat, Banyumas, Jawa Tengah pada bulan Oktober 2018 sampai Maret 2019. Penelitian menggunakan Rancangan Acak Kelompok (RAK) Non Faktorial dengan 8 perlakuan dan 3 kali ulangan. Perlakuan yang digunakan adalah isolat Desa Cipete (A), isolat Desa Papringan (B), isolat Desa Pasir Kulon (C), campuran isolat asal Desa Cipete dan Desa Papringan (AB), campuran isolat asal Desa Cipete dan Desa Pasir Kulon (AC), campuran isolat asal Desa Papringan dan Desa Pasir Kulon (BC), campuran isolat asal Desa Cipete, Desa Papringan dan Pasir Kulon (ABC), dan Kontrol (Insektisida *0,5g/liter*).. Konsentrasi dari semua perlakuan adalah 10%. Variabel yang diamati adalah mortalitas, populasi, intensitas serangan, dan musuh alami.

Hasil penelitian menunjukkan bahwa: 1) Metabolit sekunder jamur entomopatogen asal Pasir Kulon mampu membunuh walang sangit sampai 100% pada hari ke 3; 2) Perlakuan campuran ketiga metabolit sekunder jamur entomopatogen asal Cipete, Papringan, dan Pasir Kulon berpotensi menekan populasi walang sangit sampai 100%; 3) metabolit sekunder jamur entomopatogen yang berpotensi menekan intensitas serangan terbaik adalah metabolit sekunder jamur entomopatogen asal Papringan yang mampu menekan intensitas serangan sebesar 62,63%; 4) Aplikasi campuran metabolit sekunder tidak berpengaruh negatif terhadap populasi musuh alami. Musuh alami yang ditemukan adalah laba-laba predator famili *Lycosa* sp., *Oxyopes* sp., dan *Tetragnathidae* sp. yang mempunyai potensi untuk mengendalikan hama walang sangit.

SUMMARY

Rice plan (Oryza sativa L.) an important food crop and is a major commodity in supporting community food in Indonesia. Rice plan cultivation has several obstacles, including pest attacks. The farmers usually control rice plan pests by using pesticides. Excessive use of pesticides will cause problems, including resistance, resistance, and explosion of pests. Pesticides have a negative impact on the environment so it is necessary to look for other effective alternatives, namely integrated pest control (IPM). One of the controls is the use of secondary metabolites of entomopathogenic fungi. Secondary metabolites produce several substances and enzymes that can cause target insect mortality. This study aims to determine the ability of a mixture of secondary metabolites of entomopathogenic fungi cipete isolates, papringan, and kulon sand in controlling the intensity of attacks and populations of stink bug (Leptocorisa oratorius) and its natural enemy population.

This research was conducted in Plant Protection Laboratory of Agriculture Faculty, Jenderal Soedirman University and the yield on Pasir Kidul village, West Purwokerto, Banyumas Regency, Center of Java on October to March 2019. A laboratory test was used a completely randomized block (CRB) Non-Factorial with 8 treatments and 3 replications. The treatments respectively were isolate from Cipete Village (A), isolate from Papringan Village (B), isolate from Pasir Kulon (C), isolate from Cipete and Papringan (AB), isolate from Cipete Village and Pasir Kulon Village (AC), isolate from Papringan Village and Pasir Kulon Village (BC), isolate from Cipete Village, Papringan Village and Pasir Kulon (ABC), and Controls (0.5g /liter Insecticides). The concentration of all treatments is 10%. Observation variable is mortality, intensity of the attack, and natural enemies.

The conclusions were : secondary metabolite of the entomopathogenic fungi from Pasir Kulon was able to kill the stink bug up to 100% on day 3; 2) treatment of a mixture of secondary metabolites of entomopathogenic fungi, namely the ABC treatment was able to suppress the population of stink walang up to 100%; 3) secondary metabolites of entomopathogenic fungi that have the potential to suppress the intensity of the best attack is the secondary metabolite of entomopathogenic fungi from Papringan were able to reduce the intensity of stink bug attacks by 60,63%; 4) application of a mixture of secondary metabolites did not negatively affect the natural enemy population. Natural enemies found which are spiders predator Lycosa sp., Oxyopes sp., and Tetragnathidae sp. which has the potential to control pest stink pest.