

RINGKASAN

Padi merupakan tanaman budidaya yang sangat penting bagi umat manusia karena lebih dari setengah penduduk dunia tergantung pada tanaman ini sebagai sumber bahan pangan. Upaya peningkatan produksi padi di Indonesia menghadapi berbagai kendala, salah satunya yaitu penyakit hawar daun bakteri yang disebabkan oleh patogen *Xanthomonas oryzae* pv. *oryzae*. Bio P60 merupakan biopestisida ramah lingkungan yang berbahan aktif bakteri *Pseudomonas fluorescens* P60. Bio T10 berbahan aktif *Trichoderma* sp. isolat jahe. Penelitian ini bertujuan untuk mengkaji kemampuan Bio P60 dan Bio T10 serta fungisida kimia terhadap penyakit hawar daun bakteri pada tanaman padi, serta terhadap pertumbuhan dan hasil produksi tanaman padi.

Penelitian dilaksanakan di Laboratorium Perlindungan Tanaman Fakultas Pertanian Unsoed dan lahan sawah di Desa Cangkingan blok Karanganyar, Kecamatan Kedokan Bunder, Kabupaten Indramayu, pada bulan Januari sampai Juni 2016. Penelitian menggunakan Rancangan Acak Kelompok dengan tiga ulangan dan 11 perlakuan. Perlakuan terdiri atas kontrol, Bio P60, Bio T10, fungisida berbahan aktif *tebuconazole* dan *trifloxistrobin*, *tebuconazole*, propineb, *azoxistrobin* dan *difenoconazole*. Variabel yang diamati yaitu masa inkubasi, intensitas penyakit, laju infeksi, tinggi tanaman, jumlah anakan, jumlah anakan produktif, waktu berbunga pertama, bobot gabah basah, dan senyawa fenol.

Hasil penelitian menunjukkan bahwa perlakuan Bio P60 secara tunggal mampu menunda masa inkubasi sebesar 16,85%, menekan intensitas penyakit sebesar 75,90%, dan mempercepat waktu berbunga sebesar 16,84%. Perlakuan Bio T10 secara tunggal mampu meningkatkan jumlah anakan sebesar 8,22% dan meningkatkan bobot basah gabah sebesar 12,64%. Perlakuan Bio P60 atau Bio T10 yang digabungkan dengan fungisida kimia tidak lebih baik daripada penyemprotan Bio P60 dan Bio T10 secara tunggal.

SUMMARY

*Rice is staple and essential crop for human beings because more than half the world's population depend on the crop. Efforts to increase rice production in Indonesia face many obstacles, one of them is bacterial leaf blight that caused by *Xanthomonas oryzae* pv. *oryzae*. Bio P60 is an environmentally friendly biopesticide with active ingredient of *Pseudomonas fluorescens* P60. Bio T10 contain *Trichoderma* sp. ginger isolate. This research aimed to study the ability of Bio P60, Bio T10, and chemical fungicides against rice the disease, and on the growth and yield of rice.*

The research was carried out at the Laboratory of Plant Protection, Faculty of Agriculture, Jenderal Soedirman University and rice fields at Cangkingan Village, Karanganyar block, Kedokan Bunder Subdistrict, Indramayu Regency West Java from January to June 2016. Randomized block design was used with three replicates and 11 treatments. The treatment consisted of control, Bio P60, Bio T10, fungicidal active with ingredient of tebuconazole and trifloxistrobin, tebuconazole, propineb, azoxistrobin and difenoconazole. Variables observed were incubation period, intensity of the disease, infection rate, crop height, number of tillers, number of productive tillers, time of first flowering time, wet grain weight, and phenolic compounds.

Results of the research showed that the treatment of Bio P60 and Bio T10 alone could postpone the incubation period as 16,84%. Bio P60 and Bio T10 was able to suppress the disease intensity as 75,90% and accelerate the time of first flowering as 16,84%. Bio T10 alone could increase the number of tillers as 8,22% and increase wet grain weight as 12,64%. The combination of Bio P60 and Bio T10 combined with chemical fungicides was not better than Bio P60 and Bio T10 alone.