

RINGKASAN

Bawang merah (*Allium ascalonicum* L.) merupakan salah satu komoditas sayuran yang berperan penting bagi masyarakat, baik dilihat dari nilai ekonomisnya maupun kandungan gizinya. Budidaya bawang merah seringkali tidak memperhatikan faktor lingkungan yaitu para petani menggunakan pupuk anorganik yang berlebihan sehingga mengakibatkan kesuburan tanah menurun. Pupuk Organik Cair (POC) diharapkan mampu meningkatkan pertumbuhan dan produksi tanaman bawang merah karena kandungan haranya yang lengkap baik mikro maupun makro serta mampu memperbaiki kualitas tanah. Pertumbuhan produksi yang terus meningkat diiringi dengan meningkatnya serangan hama dan penyakit. Salah satu penyakit bawang merah yang harus diwaspadai adalah penyakit layu *Fusarium* yang disebabkan oleh patogen *Fusarium oxysporum*. Tujuan penelitian ini untuk mengetahui pengaruh konsentrasi dan interaksi pemberian pupuk organik cair terhadap pertumbuhan dan hasil bawang merah serta pemanfaatan Biopestisida terhadap ketahanan bawang merah terhadap penyakit. Penelitian dilaksanakan pada bulan Mei sampai Juli 2019 di Desa Tambaksari Kidul, Kecamatan Kembaran, Kabupaten Banyumas. Rancangan yang digunakan pada penelitian ini adalah Rancangan Acak Kelompok (RAK) Faktorial dengan dua faktor perlakuan yaitu konsentrasi pupuk organik cair SO Kontan Fert yang terdiri dari 4 taraf yaitu D₀ (0 ml/m²), D₁ (1000 ml/m²), D₂ (1500 ml/m²), D₃ (2000 ml/m²), dan BIO T-10 yang terdiri dari 3 taraf yaitu T₀ (0 ml/m²), T₁ (1000 ml/m²), T₂ (1500 ml/m²). Variabel yang diamati meliputi tinggi tanaman, jumlah daun, berat basah, berat kering, hasil umbi per rumpun, hasil umbi per petak dan intensitas serangan penyakit. Hasil penelitian menunjukkan: Konsentrasi POC meningkatkan tinggi tanaman, jumlah daun, dan hasil umbi per petak. Dosis BIO T-10 meningkatkan tinggi tanaman, bobot tanaman segar, bobot tanaman kering, hasil umbi per petak, dan meningkatkan ketahanan bawang merah terhadap intensitas serangan penyakit. Interaksi POC dan BIO T-10 berpengaruh nyata terhadap jumlah daun dan ketahanan bawang merah terhadap intensitas serangan penyakit.

Kata kunci: Bawang merah, POC SO Kontan Fert, *Trichoderma*, sp.

SUMMARY

Shallots (*Allium ascalonicum* L.) are a vegetable commodity that plays an important role in the community, both in terms of their economic value and nutritional content. Onion cultivation often does not pay attention to environmental factors, namely farmers using excessive inorganic fertilizers, which results in decreased soil fertility. Liquid Organic Fertilizer (LOF) is expected to be able to increase the growth and production of shallot plants because of its complete nutrient content both micro and macro and is able to improve soil quality. Production growth continues to increase accompanied by an increase in pest and disease attacks. One of the shallot diseases to watch out for is *Fusarium* wilt, which is caused by the pathogen *Fusarium oxysporum*. The purpose of this study was to determine the effect of concentration and interaction of liquid organic fertilizer on the growth and yield of shallots and the use of biopesticides on the resistance of shallots to disease. The research was conducted from May to July 2019 in Tambaksari Kidul Village, Kembaran District, Banyumas Regency. The design used in this study was a factorial randomized block design with two treatment factors, namely the concentration of liquid organic fertilizer SO Kontan Fert consisting of 4 levels, namely D₀ (0 ml/m²), D₁ (1000 ml/m²), D₂ (1500 ml/m²), D₃ (2000 ml/m²), and BIO T-10 which consists of 3 levels, namely T₀ (0 ml/m²), T₁ (1000 ml/m²), T₂ (1500 ml/m²). The variables observed included plant height, number of leaves, wet weight, dry weight, tuber yield per clump, tuber yield per plot, and intensity of disease attack. The results showed: LOF concentration increased plant height, leaf number, and tuber yield per plot. The dose of BIO T-10 increased plant height, fresh plant weight, dry plant weight, tuber yield per plot, and the resistance of shallots to the intensity of disease attacks. The interaction of LOF and BIO T-10 had a significant effect on the number of leaves and the resistance of shallots to the intensity of disease attacks.

Keywords: Shallots, LOF SO Kontan Fert, *Trichoderma*, sp.