ABSTRAK

EFEKTIVITAS EKSTRAK METANOL DAUN WALISONGO (*Schefflera arboricola*) SEBAGAI BIOFUNGISIDA TERHADAP PERTUMBUHAN *Colletotrichum* sp. DAN *Fusarium* sp.

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Colletotrichum sp. dan *Fusarium* sp. merupakan fungi patogen penyebab penyakit antraknosa dan layu fusarium yang menimbulkan kerugian ekonomi pada tanaman hortikultura, khususnya cabai. Pengendalian penyakit umumnya menggunakan fungisida sintetis yang berpotensi menimbulkan dampak negatif terhadap lingkungan dan kesehatan manusia. Tujuan penelitian ini adalah untuk mengetahui efektivitas ekstrak metanol daun walisongo (*Schefflera arboricola*) sebagai biofungisida terhadap pertumbuhan *Colletotrichum* sp. dan *Fusarium* sp. secara *in vitro*. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) satu faktor, yaitu konsentrasi ekstrak metanol daun walisongo (5%, 10%, 15%) dan kontrol negatif (tanpa perlakuan) serta kontrol positif (ketokonazol), dengan lima ulangan. Parameter yang diamati adalah diameter koloni fungi dan persentase daya hambat. Data dianalisis menggunakan analisis ragam (anara) dan dilanjutkan dengan uji *Tukey* pada taraf kepercayaan 5% ($\alpha = 0,05$). Hasil skrining fitokimia menunjukkan bahwa ekstrak metanol daun walisongo mengandung alkaloid, flavonoid, saponin, tanin, dan terpenoid. Hasil anara menunjukkan bahwa ekstrak metanol daun walisongo secara signifikan menghambat pertumbuhan kedua jamur uji. Konsentrasi 10% merupakan konsentrasi yang paling efektif dengan persentase penghambatan sebesar 36,2% terhadap *Fusarium* sp. dan 38,9% terhadap *Colletotrichum* sp. sehingga ekstrak metanol daun walisongo berpotensi sebagai biofungisida nabati yang dapat mendukung pertanian berkelanjutan.

Kata kunci : biofungisida, *Schefflera arboricola*, *Colletotrichum* sp., *Fusarium* sp.

ABSTRACT

THE EFFECTIVENESS OF METHANOL EXTRACT OF WALISONGO LEAVES (*Schefflera arboricola*) AS A BIOFUNGICIDE AGAINST THE GROWTH OF *Colletotrichum* sp. AND *Fusarium* sp.

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Colletotrichum sp. and *Fusarium* sp. are pathogenic fungi that cause anthracnose and Fusarium wilt diseases, resulting in economic losses in horticultural crops, especially chili plants. Disease control is generally carried out using synthetic fungicides, which have the potential to cause negative impacts on the environment and human health. This study aimed to determine the effectiveness of methanol extract of walisongo leaves (*Schefflera arboricola*) as a biofungicide against the growth of *Colletotrichum* sp. and *Fusarium* sp. in vitro. This study used a Completely Randomized Design (CRD) with one factor, namely the concentration of methanol extract of walisongo leaves (5%, 10%, and 15%), negative control (without treatment), and positive control (ketoconazole), with five replications. The observed parameters were fungal colony diameter and percentage of inhibition. Data were analyzed using analysis of variance (ANOVA) followed by Tukey's test at a 5% significance level ($\alpha = 0.05$). Phytochemical screening results showed that the methanol extract of walisongo leaves contained alkaloids, flavonoids, saponins, tannins, and terpenoids. The ANOVA results showed that the methanol extract of walisongo leaves significantly inhibited the growth of both tested fungi. The 10% concentration was the most effective concentration, with an inhibition percentage of 36.2% against *Fusarium* sp. and 38.9% against *Colletotrichum* sp. Therefore, methanol extract of walisongo leaves has the potential to be used as a botanical biofungicide to support sustainable agriculture.

Keywords: biofungicide, *Schefflera arboricola*, *Colletotrichum* sp., *Fusarium* sp.