

ABSTRAK

EKSPLORASI JAMUR ANTAGONIS DARI RIZOSFER BAMBU (*Bambusa* sp.) DALAM MENGHAMBAT PERTUMBUHAN PATOGEN *Fusarium* sp. PADA TANAMAN KELOR (*Moringa oleifera* L.) SECARA *IN VITRO*

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Kejadian serangan patogen *Fusarium* sp. pada tanaman kelor dapat mengganggu proses budidaya dan menurunkan kualitas maupun kuantitas hasil tanaman. Dibutuhkan perhatian khusus dalam pengendalian jamur patogen *Fusarium* sp. mengingat peralihan cara pengendalian pestisida kimia ke pengendalian yang lebih ramah lingkungan. Maka dari itu, tujuan penelitian ini yaitu mencari jamur yang bersifat antagonis dan berpotensi menjadi agen hayati dalam menekan pertumbuhan patogen *Fusarium* sp. yang berasal dari rizosfer bambu. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 6 perlakuan yaitu kontrol dan 5 perlakuan jamur rizosfer bambu (JRB) hasil eksplorasi. Data penelitian dianalisis menggunakan sidik ragam kemudian dilanjutkan dengan uji Jarak Berganda Duncan taraf 5%. Hasil eksplorasi didapatkan 6 isolat JRB dan dilakukan screening melalui uji hipersensitif dan uji kecepatan pertumbuhan. Hasil uji daya hambat diketahui JRB-5 yang berasal dari genus *Trichoderma* sp. menjadi isolat paling baik dalam menghambat pertumbuhan *Fusarium* sp. yaitu 58,05% dengan kategori tinggi. Sejalan dengan hal tersebut, perlakuan JRB-5 memberikan diameter *Fusarium* sp. paling kecil yaitu hanya 27,29 mm pada 7 HSI. Diketahui bahwa kelima jamur rizosfer bambu berasal dari 3 genus yang berbeda yaitu 3 isolat genus *Trichoderma* spp., *Colletotrichum* sp., dan *Mortierella* sp.

Kata kunci : *Fusarium* sp., daya hambat, rizosfer, bambu, *Trichoderma* sp.

ABSTRACT

EXPLORATION OF ANTAGONIST FUNGUS FROM THE RIZOSFER OF BAMBOO (*Bambusa sp.*) IN SUPPRESSING THE GROWTH OF THE PATOGEN *Fusarium sp.* on KELOR (*Moringa oleifera L.*) PLANT IN VITRO

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Fusarium sp. a pathogen attack on moringa plants can disrupt the cultivation process and reduce the quality and quantity of crop yields. Special attention is needed in controlling the fungal pathogen *Fusarium sp.* considering the transition from chemical pesticide control methods to more environmentally friendly controls. Therefore, the purpose of this study was to find fungi that are antagonistic and have the potential to become biological agents in suppressing the growth of the pathogen *Fusarium sp.* originating from the rhizosphere of bamboo. This study used a completely randomized design (CRD) with 6 treatments, namely control and 5 treatments of bamboo rhizosphere fungi (JRB) from exploration. The research data were analyzed using variance analysis and then continued with the Duncan Multiple Range test at the 5% level. The exploration results obtained 6 JRB isolates and were screened through hypersensitivity tests and growth speed tests. The results of the inhibition test showed that JRB-5 from the genus *Trichoderma sp.* became the best isolate in inhibiting the growth of *Fusarium sp.* which was 58.05% with a high category. In line with this, the JRB-5 treatment gave the smallest diameter of *Fusarium sp.* which was only 27.29 mm at 7 HSI. It is known that the five bamboo rhizosphere fungi come from 3 different genera, namely 3 isolates of the genus *Trichoderma spp.*, *Colletotrichum sp.* and *Mortierella sp.*

Keywords: *Fusarium sp.*, inhibition, rhizosphere, bamboo, *Trichoderma sp.*