

INTISARI

ISOLASI DAN IDENTIFIKASI JAMUR DARI KOMPOS DAN BERDAYA ANTAGONISTIK TERHADAP PATOGEN TULAR TANAH

Fusarium oxysporum DAN *Rhizoctonia solani*

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Kompos mengandung ragam jenis dan jumlah mikroorganisme termasuk jamur. Sebagian jamur memiliki daya antagonistik terhadap patogen tanaman. Penelitian ini bertujuan untuk mengisolasi dan mengidentifikasi jamur dari kompos yang memiliki kemampuan antagonistik terhadap patogen tular tanah *Fusarium oxysporum* dan *Rhizoctonia solani*. Isolasi jamur dari kompos media jamur kancing dilakukan dengan metode *pour plating*. Seleksi isolat dilakukan dengan uji antagonistik menggunakan metode *dual culture assay*. Isolat terpilih diidentifikasi secara molekuler berdasarkan sekuen ITS-rDNA. Hasil penelitian didapatkan 6 isolat yang berdaya antagonistik prospektif yaitu isolat 1, 4, 14, 16, 20, dan 24. Berdasarkan sekuen ITS rDNA isolat 1, 4, 14, 16, 20, dan 24 berturut-turut adalah *Aspergillus neoellipticus*, *Neocosmospora merxiana*, *Fusarium obliquiseptatum*, *Fusarium lichenicola*, *Scedosporium apiospermum* dan *Neocosmospora sp.*

Kata kunci: Kompos, Isolasi, Identifikasi, Jamur, Daya antagonistik

ABSTRACT

ISOLATION AND IDENTIFICATION OF FUNGI FROM COMPOST AND THE ANTAGONISTIC ACTIVITY AGAINST SOIL BORNE PATHOGEN

Fusarium oxysporum* AND *Rhizoctonia solani

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Compost contains various type and number of microorganisms including fungi. Some fungi are antagonistic to plant pathogens. This study aims to isolate and identify fungi from compost which has antagonistic ability against soil-borne pathogens, *Fusarium oxysporum* and *Rhizoctonia solani*. Isolation of fungi from *Agaricus bisporus* compost was carried out by Pour Plating method. The isolates were selected by antagonistic test using the dual culture assay. Selected isolates were identified molecularly based on ITS-rDNA sequence. The results showed that 6 isolates of 1, 4, 14, 16, 20, and 24 have prospective antagonistic activity against tested pathogen. Based on the ITS rDNA sequence, isolate of 1, 4, 14, 16, 20, and 24 was identified as *Aspergillus neoellipticus*, *Neocosmospora merxiana*, *Fusarium obliquiseptatum*, *Fusarium lichenicola*, *Scedosporium apiospermum* and *Neocosmosporas* sp, respectively.

Keyword: Compost, Isolation, Identification, Fungi, Antagonistic activity