

INTISARI

Analisis Jumlah dan Jenis Spora Jamur Mikoriza Arbuskular dari Tanah Perakaran Tanaman Pisang (*Musa Paradisiaca L.*)

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Tanaman pisang (*Musa paradisiaca L.*) merupakan tanaman yang mudah tumbuh dan banyak dijumpai di iklim tropis. Karakteristik tanaman pisang yang mudah tumbuh pada daerah tropis salah satunya disebabkan adanya simbiosis tanaman pisang dengan Jamur Mikoriza Arbuskular (JMA). Hubungan simbiotik mutualisme antara JMA dan tanaman pisang ditandai dengan adanya spora JMA pada daerah rhizosfer tanaman pisang. Penelitian ini bertujuan untuk mengetahui ada berapa macam spora JMA yang dapat diisolasi dari 3 varietas tanaman pisang yang banyak ditemukan di Indonesia yaitu pisang ambon, pisang kluthuk dan pisang uter berdasarkan ciri morfologisnya. Isolasi dilakukan dengan metode *wet sieving* dan *decanting*. Kemudian dilakukan perhitungan sebaran spora pada rhizosfer tanaman pisang dan pengamatan morfologi dengan mikroskop stereo pada spora JMA yang sudah diisolasi. Pengamatan morfologi dilakukan untuk mengamati ukuran spora, warna spora, dan reaksi dinding spora setelah ditambahkan reagen PVLG (*polyvinyl alcohol-lactic acid-glycerol*) dan Melzer. Diketahui ditemukan 2 spora merah, 5 spora kuning, 132 spora coklat dan 2 spora putih pada varietas pisang ambon; 38 spora kuning dan 41 spora coklat pada varietas pisang kluthuk; dan 1 spora merah, 5 spora kuning dan 26 spora coklat pada varietas pisang uter. Kemudian berdasarkan ciri morfologis spora yang telah diisolasi dari rhizosfer ketiga varietas pisang menunjukkan ciri morfologis seperti *Glomus sp*, *Scutellospora sp*, dan *Acaulospora sp*

Kata Kunci : Jamur Mikoriza Arbuskular, *Musa paradisiaca*, Isolasi Spora, *Wet Sieving*, Karakteristik morfologi

ABSTRACT

Quantification and Identification of Arbuscular Mycorrhizal Fungi in the Banana Rhizosphere (*Musa paradisiaca* L.)

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Banana plant (*Musa paradisiaca* L.) is cultivated all over the world in tropical and subtropical climates. Several beneficial plant-microbes interactions support the growth of this plant, including symbiosis with Arbuscular Mycorrhizal Fungi (AMF). The mutualistic symbiosis between AMF and banana plants is characterized by the existence of AMF spores in the rhizosphere. This research aims to identify the AMF spores from three popular varieties of banana plants in Indonesia, especially cultivars of Ambon, Kluthuk and Uter based on spore morphological characteristics. Isolation was carried out using the wet sieving and decanting method, followed by the quantification and observation of spore's distribution, then characterization of spores' morphology using a stereo microscope. Morphological observations were to observe spore size, spore color, and reaction of spore wall layers with PVLG (polyvinyl alcohol-lactic acid-glycerol) and Melzer reagents. It was observed that there were 2 red spores, 5 yellow spores, 132 brown spores and 2 white spores found in the Ambon cultivar; while 38 yellow spores and 41 brown spores were found in the Kluthuk cultivar; and 1 red spore, 5 yellow spores and 26 brown spores were observed in the Uter cultivar. Based on the morphological characteristics, there were three spore types including *Glomus* sp., *Scutellospora* sp., and *Acaulospora* sp. observed from those three banana cultivars.

Keywords: Arbuscular Mycorrhizal Fungi, *Musa paradisiaca*, Spore Isolation, Wet sieving, Morphological Characteristic