TOLERANSI TANAMAN PENEDUH *Polyalthia longifo*lia DAN *Pterocarpus indicus* TERHADAP *Ganoderma* sp. ISOLAT KAMPUS UNIVERSITAS GADJAH MADA

Intisari

Tanaman peneduh yang ada wilayah kampus Universitas Gadjah Mada merupakan salah satu faktor yang mendukung kenyamanan proses belajar mengajar. Namun *Ganoderma* spp., penyebab penyakit busuk akar merah telah menyerang sebagian tanaman peneduh yang ada. Pemilihan jenis pohon peneduh belum berdasarkan ketahanan terhadap serangan *Ganoderma* sp.

Penelitian ini bertujuan untuk mengetahui kekerabatan isolat *Ganoderma* spp. yang ada serta ketahanan *Polyalthia longifolia* (glodokan) dan *Pterocarpus indicus* (angsana) terhadap *Ganoderma* sp. Isolat jamur patogen didapatkan dari sekeliling Fakultas Teknologi Pertanian UGM. Beberapa pendekatan dilakukan untuk mencapai tujuan tersebut, yaitu: (1) identifikasi pohon yang sakit dan isolasi penyebab penyakit, (2) karakterisasi koloni *Ganoderma* spp. secara makroskopis dan mikroskopis, (3) uji Postulat Koch, serta (4) uji toleransi *P. longifolia* dan *P. indicus* terhadap *Ganoderma* sp.

Hasil isolasi *Ganoderma* spp. di sekeliling Fakultas Teknologi Pertanian UGM diperoleh enam isolat, yang diduga memiliki kekerabatan dekat berdasarkan kenampakan tubuh buah dan morfologi koloni secara *in vitro*. Uji toleransi *P. longifolia* dan *P. indicus* terhadap *Ganoderma* sp. membuktikan bahwa *P. longifolia* lebih tahan terhadap infeksi *Ganoderma* sp. dibandingkan *P. indicus*. Sebagai rekomendasi, *P. longifolia* merupakan jenis yang sesuai sebagai pohon peneduh di wilayah kampus UGM, terutama pada lokasi-lokasi yang telah diketahui mengandung sumber inokulum *Ganoderma* sp.

Kata kunci: *Ganoderma, Polyalthia longifolia, Pterocarpus indicus,* ketahanan tanaman

Susceptibility of urban trees *Polyalthia longifolia* and *Pterocarpus indicus* to infection with red root rot fungus *Ganoderma* sp. isolated from campus of Universitas Gadjah Mada

Abstract

Urban trees on the campus of Universitas Gadjah Mada play an important role in increasing environmental qualities as well as in supporting the teaching and learning processes. However, red root rot disease caused by Basidiomycete *Ganoderma* sp. has severely infected some existing urban trees. This experiment was aimed at learning: (1) the relationship among isolates of *Ganoderma* spp. based on the similarity of morphological appearances, and (2) the susceptibility of *Polyalthia longifolia* (glodokan) and *Pterocarpus indicus* (angsana) to infection with *Ganoderma* sp.

Identification of infected trees was performed around the area of the Agricultural Technology Faculty, UGM. Further steps were carried out to achieve those objectives, i.e.: (1) isolation of *Ganoderma* spp. found on the infected trees, (2) characterization of the colonies of *Ganoderma* spp. based on the morphological appearance macroscopically and microscopically, (3) testing of Koch's postulate, and (4) examination of the susceptibility of *P. longifolia* and *P. indicus* to infection with *Ganoderma* sp.

Six isolates of *Ganoderma* spp. were obtained from several different tree species. Those *Ganoderma* spp. isolates were suspected to have close relationships, based on the observation of fruiting bodies and *in vitro* colony morphologies. The susceptibility test of *P. longifolia* and *P. indicus* to *Ganoderma* sp. indicated that *P. longifolia* was more resistant to fungal pathogen infection than that of *P. indicus*. Therefore*, P. longifolia*, but not *P.*

indicus, should be planted on the areas that have been infested with inoculums of *Ganoderma* sp.

Keywords: *Ganoderma, Polyalthia longifolia, Pterocarpus indicus*, plant resistance