

**POLA SERANGAN JAMUR AKAR MERAH (*Ganoderma* sp.) PADA
KEBUN BENIH MANGIUM (*Acacia mangium* Willd.)
DI WONOGIRI - JAWA TENGAH**

INTISARI

Mangium telah ditanam dalam skala luas dengan tujuan awalnya untuk memenuhi kebutuhan bahan baku industri pulp dan kertas. Pada masa sekarang, kayu mangium mulai digunakan sebagai bahan baku industri perkayuan, misalnya sebagai kayu gergajian, papan partikel, venir sayat dan kayu perkakas. Untuk kepentingan bahan baku industri perkayuan maka kayu yang baik dicirikan oleh batang yang lurus, batang bebas cabang tinggi, bulat dan bebas dari cacat kayu. Selain penampilan fisik kayu maka kualitas kayu juga ditentukan oleh mutu serat, kekuatan dan keawetan kayu. Jamur *Ganoderma* sp. penyebab penyakit akar merah dapat menurunkan kualitas serat kayu, bahkan umumnya berakibat kematian pada pohon yang diserang. Kemampuan sel dan jaringan untuk melaksanakan fungsi fisiologis akan menurun atau terhenti sama sekali. Sebagai akibatnya pertumbuhan menjadi terganggu atau tumbuhan mati. Penelitian bertujuan untuk mengevaluasi respon famili mangium terhadap serangan jamur *Ganoderma* sp. beserta pola penyebaran penyakitnya.

Pembentukan tubuh buah *Ganoderma* sp. sebagai ciri utama serangan tingkat berat dan diperlakukan sebagai pohon pusat serangan. Pohon yang telah menunjukkan ciri-ciri serangan *Ganoderma* sp. diamati tingkat kerusakannya dengan menggunakan tiga kriteria yaitu: kerontokan tajuk, kematian cabang dan busuk pada pangkal batang yang dinyatakan dalam persen (%). Unit pengamatannya adalah kelompok serangan yang terdiri atas 1 atau beberapa pohon pusat serangan dan penyebaran penyakit dilihat dari kondisi pohon sampel disekitarnya, seluruh pohon yang diamati merupakan famili *half-sib*. Analisis hasil dilakukan dalam rancangan penelitian acak lengkap.

Hasil penelitian menunjukkan bahwa pola serangan *Ganoderma* sp. merupakan pola serangan terpusat yang berawal dari pusat serangan menuju kesegala arah pada pohon disekitarnya. Rerata serangan pada pohon sampel 1 sebesar 13,55%, pohon sampel 2 sebesar 8,63% dan pohon sampel 3 sebesar 5,22%. Terdapat respon yang berbeda pada tingkat famili mangium terhadap jamur *Ganoderma* sp.. Perbedaan ini terlihat dari tingkat serangan dan konsistensi kemunculan famili mangium baik sebagai pohon pusat serangan maupun sebagai pohon sampel. Sebanyak 47 famili mempunyai kecenderungan intensitas serangan berat, terutama famili nomor 18*, 23, 30, 36, 37, 39, 60, 100, dan 117. Sedangkan famili yang terlihat kurang merespon penyakit akar merah sebanyak 16 famili, terutama famili nomor 5, 26, 31 dan 34. Famili-famili yang lain merespon dengan tingkat serangan sedang.

Kata kunci : *Ganoderma* sp., *A. mangium*, pola serangan, respon famili.

**PATTERN OF RED ROT ROOT (*Ganoderma* sp.) ATTACK ON
MANGIUM (*Acacia mangium* Willd.) SEED ORCHARD
IN WONOGIRI – CENTRAL JAVA**

ABSTRACT

Mangium has been planted on large scale with early intentions to fulfill the need of raw materials for the pulp and paper industry. Now, timber from mangium is also used as raw materials in other timber industries, such as for sawed wood, particle board, sliced veneer and construction wood. For timber industries, good timber can be characterized by straight stem, high branches, roundness and free of wood deformities. Other than physical appearance the quality of timber is also defined by the quality of wood fibre, strenght and preservation qualities. *Ganoderma* sp. fungi that causes red rot root is responsible for degrading the quality of wood and rarely killing the infected tree. Ability of cells and tissues to carry out physiologic function will be slowed down or stop completely. As a result growth is disturbed and the plant dies. This research was aimed to evaluate the response of mangium towards infection of the *Ganoderma* sp. also the pattern of spreading.

The formation of *Ganoderma* sp. fruit body as the main characteristic of infection on a heavy scale and was treated as the source tree of infection. Trees that show the symtoms of infection of *Ganoderma* sp. was observed by the rate of destruction using 3 criterias that are : the sheeding of leaves, the death of branches and rotting of the base of trees and was represented in percentage (%). The unit of observation were infected groups consisting of one or more tree(s) as the source of infection and the spreading of infection observed from the conditions of sample trees around it, with all trees observed categorized in the half-sib family. Analysis of outcome was done using the complete random research method.

Result shows that the pattern of infection of *Ganoderma* sp. is a concentric pattern starting from the center of spreading in all directions surrounding it. The average on tree sample 1 was 13,55%, tree sample 2 was 8,63% and tree sample 3 as much as 5,22%. There were several different response on the family level of mangium towards the *Ganoderma* sp. fungi. This difference was observed by the severity of infection and consistancy of mangium family as the source tree of infection as well as sample tree. As mush as 47 family has a tendency of severe intensity of infection, especially in family number 18*, 23, 30, 36, 37, 39, 60, 100, dan 117. As for families that show less responses of the red rot root symptoms as 16 families, especially family number 5, 26, 31 and 34. As for the other families responding in average infection rate.

Key words : *Ganoderma* sp., *A. mangium*, infection pattern, family responses.