PENGARUH FREKUENSI DISINFEKSI MIKORISA DAN NAUNGAN TERHADAP PERTUMBUHAN 6 JENIS SEMAI DALAM FAMILI DIPTEROCARPACEAE

INTISARI

Oleh:
Agung Kurniawan[1]
H. H. Nurjanto[2]
Suhardi[3]

Dipterocarpaceae adalah famili tumbuhan yang mendominasi hutan hujan tropika dataran rendah dengan daerah sebaran alami yang luas, kayunya multiguna dan bernilai tinggi. Pertumbuhan dipterocarpaceae dipengaruhi oleh intensitas cahaya dan mikorisa. Penelitian ini bertujuan untuk mengetahui pengaruh adanya mikorisa dan naungan terhadap 6 jenis semai dalam famili dipterocarpaceae.

Penelitian ini menggunakan Split-plot Rancangan Acak Lengkap Berblok (Split-plot RCBD) dengan 6 perlakuan jenis semai yakni *Shorea leprosula*, *Shorea virescens*, *Shorea smithiana, Hopea mengarawan, Shorea parvifolia* dan *Shorea selanica*, 2 perlakuan naungan (tidak ternaungi dan ternaungi), dan 3 perlakuan disinfeksi (tanpa disinfeksi, disinfeksi 4 minggu sekali dan disinfeksi 2 minggu sekali). Penelitian disusun dalam 2 blok dan setiap kombinasi diulang 3 kali, sehingga total semai adalah 216 semai (unit).

Hasil penelitian menunjukkan bahwa pertumbuhan tinggi yang tertinggi dicapai *H. mengarawan* (11,2 cm) dan terendah *S. selanica* (5,4 cm). Sedangkan pertumbuhan diameter terbesar *S. smithiana* (1,6 mm) dan yang terkecil adalah *S. selanica* (1 mm). Naungan memberikan pertumbuhan tinggi paling baik (8,2 cm) sedangkan tanpa naungan (6,8). Pertumbuhan diameter yang terbesar dicapai pada tempat tanpa naungan (1,5 mm). Perlakuan naungan juga memberikan pengaruh terhadap infeksi mikorisa. Persen infeksi mikorisa pada perlakuan naungan sebesar 94,8 %, sedangkan perlakuan tanpa naungan hanya sebesar 89,8%. Disinfeksi mikorisa tidak berpengaruh terhadap pertumbuhan tinggi semai, tetapi memperlambat pertumbuhan diameter jenis tertentu secara jelas yakni *H. mengarawan, S. selanica* dan *S. parvifolia.* Disinfeksi mikorisa 2 minggu sekali menyebabkan pertumbuhan diameter paling jelek (0.8 mm). Pengaruh disinfeksi mikorisa pada *S. leprosula*, *S. smithiana* dan *S. veriscens* tidak berpengaruh secara jelas.

Kata Kunci: Disinfeksi mikorisa, naungan, Dipterocarpaceae, pertumbuhan semai

---

[1] Mahasiswa Jurusan Budidaya Hutan Fakultas Kehutanan UGM.
[2] Pembimbing skripsi I, staf pengajar Jurusan Budidaya Hutan Fakultas Kehutanan UGM.
[3] Pembimbing skripsi II, staf pengajar Jurusan Budidaya Hutan Fakultas Kehutanan UGM.

EFFECT OF FREQUENCY OF MYCORRHIZAL DISINFECTION AND SHADING TO THE SEEDLING GROWTH OF SIX SPECIES DIPTEROCARARPACEAE

ABSTRACT

By :
Agung Kurniawan[1]
H. H. Nurjanto[2]
Suhardi[3]

Dipterocarp is a dominant plant family of lowland tropical rain forest. It has wide distribution, and the wood is multipurpose and exspensive. The growth of Dipterocarp is influenced by light intensity and mycorrhiza. The objective of this research is to observe the influence of mycorrhizal disinfection and shading to the seedling growth of 6 dipterocarpaceae species.

This research used split-plot randomized complete block design with 6 treatments of seedling species (*Shorea leprosula*, *Shorea virescens*, *Shorea smithiana, Hopea mengarawan,* *Shorea parvifolia* and *Shorea selanica)*, 2 shading treatments (unshaded and shaded), and 3 disinfection treatments (no disinfection, disinfection every 4 weeks and disinfection every 2 weeks). The research was arranged in 2 blocks and each combination was repeated 3 times so the number of seedlings used were 216 seedlings (unit).

Result of the research showed that the highest growth was reached by *H. mengarawan* (11,2 cm) and the lowest was reached by *S. selanica* (5,4 cm). The biggest diameter growth was reached by *S. smithiana* (1,6 mm) and the smallest was reached by *S. selanica* (1 mm). Shading promoted greater height growth (8,2 cm) than unshaded treatment (6,8 cm). The biggest diameter growth was reached in unshaded treatment (1,5 mm). Shading treatment also promoted mycorrhizal infection. Percent mycorrhizal infection in the shaded treatment was 94,8 % compared to in unshaded treatment which was only 89,8 %. Mycorrhizal disinfection did not influence height growth but reduced diameter growth of seedlings particulary in *H. mengarawan, S. selanica* dan *S. parvifolia.* Mycorrhiza disinfection every 2 weeks caused the lowest diameter growth (0,8 mm) followed by every 4 weeks and control. Effect of mycorrhizal disinfection on *S. leprosula*, *S. smithiana* and *S. veriscens* were unclear.

Keywords : Mycorrhiza disinfection, shading, Dipterocarp, seedling growth

[1] Student of Silviculture Department, Forestry Faculty, GMU.
[2] Counsellor skripsi I, Lecturer of Silviculture Department, Faculty of Forestry , GMU.
[3] Counsellor skripsi II, Lecturer of Silviculture Department, Faculty of Forestry , GMU.