

**Peningkatan Pertumbuhan Bibit Sengon (*Falcataria moluccana* (Miq.)
Barneby & J.W. Grimes) dengan Aplikasi *Trichoderma harzianum* dan
Pupuk Kandang Sapi**

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ABSTRAK

Sengon (*Falcataria moluccana* (Miq.) Barneby & J.W. Grimes) merupakan tanaman yang memberikan dampak ganda baik sebagai tanaman produksi maupun sebagai tanaman konservasi. Kendala budidayanya adalah serangan penyakit sehingga pertumbuhan menurun. *Trichoderma harzianum* dapat menginduksi ketahanan sistemik tanaman dan mendekomposisi bahan organik dalam tanah. Efektivitas *Trichoderma harzianum* dipengaruhi oleh bahan organik. Tujuan penelitian untuk menguji interaksi antara *Trichoderma harzianum* dan pupuk kandang sapi, memperoleh peran *Trichoderma harzianum* terhadap pertumbuhan bibit tanaman sengon, serta mendapatkan dosis pupuk kandang sapi yang sesuai untuk pertumbuhan *Trichoderma harzianum* dan bibit sengon. Penelitian dilaksanakan di dusun Jati, desa Karangasem, kecamatan Ponjong, kabupaten Gunungkidul pada bulan April sampai Juli 2019. Penelitian disusun dengan rancangan lingkungan berupa Rancangan Acak Kelompok (RAK) yang disusun dengan rancangan petak terbagi dengan ulangan 4 kali. *Main plot* berupa aplikasi *Trichoderma harzianum* di mana T0 adalah tanpa *Trichoderma harzianum* dan T1 adalah aplikasi *Trichoderma harzianum* 20 gram/tanaman. Sub plot berupa dosis pupuk kandang sapi di mana P0 adalah tanpa pupuk kandang sapi, P1 (40 gram/tanaman), P2 (80 gram/tanaman), dan P3 (120 gram/tanaman). Hasil penelitian menunjukkan bahwa terdapat interaksi antara perlakuan aplikasi *Trichoderma harzianum* dan dosis pupuk kandang sapi terhadap parameter luas daun, volume akar, bobot segar dan bobot kering bibit tanaman sengon. Aplikasi *Trichoderma harzianum* 20 gram/tanaman dengan dosis pupuk kandang sapi 80 gram/tanaman mampu meningkatkan pertumbuhan bibit sengon.

Kata kunci: *sengon*, *Trichoderma harzianum*, *pupuk kandang sapi*

Increase Growth of Sengon Seeds (*Falcataria moluccana* (Miq.) Barneby & J.W. Grimes) with the Application of *Trichoderma harzianum* and Cow Manure

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ABSTRACT

Sengon (*Falcataria moluccana* (Miq.) Barneby & J.W. Grimes) is a plant which has a double impact both as a production plant and as a conservation plant. However, Sengon has a constraint on its cultivation which is a disease, so the growth decreases. *Trichoderma harzianum* can induce resistance system of these plants and decompose organic matter in the soil. The effectiveness of *Trichoderma harzianum* is influenced by organic material. This research was aimed to examine the interaction between *Trichoderma harzianum* and cow manure, obtain the role of *Trichoderma harzianum* on the growth of the sengon plant seedlings, and obtain doses of cow manure that are suitable for the growth of *Trichoderma harzianum* and sengon seedlings. The research was conducted in Jati, Karangasem, Ponjong, Gunungkidul regency from April to July 2019. This research used an experimental design namely randomized complete block design (RCB) which was arranged in split plot design that divided by 4 replications. The Main plot was *Trichoderma harzianum* application with T0 as control and T1 as *Trichoderma harzianum* application 20 grams / plant. The sub-plot consisted of various cow manure doses with P0 as control, P1 (40 grams / plant), P2 (80 grams / plant), and P3 (120 grams / plant). The results showed that there was an interaction between the treatment of *harzianum* application and the dosage of cow manure on the leaf area, root volume, fresh weight and dry weight of sengon seedlings. Application of *Trichoderma harzianum* 20 gram / plant with a dose of 80 gram cow manure / plant able to increase the growth of sengon seedlings.

Keywords: *sengon, Trichoderma harzianum, cow manure*