

ABSTRAK

Gaharu (*Aquilaria malaccensis* lamk) merupakan salah satu produk elit komoditi hasil hutan bukan kayu yang dikenal sebagai "pohon emas" di banyak kalangan masyarakat Indonesia. Gaharu Jenis ini dapat dijumpai di Bangladesh, Bhutan, India, Indonesia, Iran, Laos, Malaysia, Myanmar, Filipina, Singapura, dan Thailand. Di Indonesia sendiri gaharu bisa dijumpai hampir diseluruh daerah di Indonesia. Gaharu mempunyai kondisi tumbuh yang cocok dengan suhu udara 24-35 C, Kelembapan 80-90%, Dan curah hujan 1.000-1.500 mm/Tahun. Kondisi tanah lahan yang cocok untuk tanaman tersebut pada jenis podsolik dengan struktur tanah lempung/liat berpasir yang berhumus. Adapun kesesuaian topografi lahannya dengan ketinggian 10-400 Mdpl. Tujuan dari penelitian ini yaitu untuk menganalisis pengaruh mol rebung terhadap pertumbuhan bibit gaharu serta untuk menentukan konsentrasi mol rebung terbaik yang mendukung pertumbuhan bibit gaharu tersebut. Bahan yang digunakan dalam penelitian ini yaitu bibit gaharu. Bahan yang digunakan dalam penelitian ini yaitu bibit gaharu (*Aquilaria malaccensis* Lamk.), pupuk NPK Mutiara 16-16-16, tanah topsoil jenis podsolik, pupuk kandang kotoran sapi, rebung bambu betung, gula merah, air kelapa, air cucian beras. Alat yang digunakan berupa polybag (14 cm x 22 cm), cangkul, parang, meteran, alat ukur takar ml, dan alat lainnya yang berhubungan dengan penelitian. Metode yang digunakan pada penelitian ini adalah rancangan percobaan rancangan acak lengkap (RAL) dengan faktor tunggal yang terdiri dari 5 taraf konsentrasi pemberian MOL. adapun konsentrasi yang diberikan terdiri atas: m1 = MOL Rebung Bambu (10ml/L), m2 = MOL Rebung Bambu (20ml/L), m3 = MOL Rebung Bambu (30ml/L), m4 = MOL Rebung Bambu (40ml/L), m5 = MOL Rebung Bambu (50ml/L). Dari lima perlakuan tersebut akan dilakukan 4 kali ulangan, sehingga terdapat 20 satuan percobaan. Dalam satu petak percobaan terdiri dari 5 bibit, sehingga total yang diperlukan adalah 100 bibit. Di antara 5 sampel bibit salah satunya menjadi sampel destruktif di akhir penelitian. Perlakuan Mikroorganisme Lokal (MOL) dilakukan setiap 7 hari sekali setelah tanam di polybag dan disiram setelah tanam. Pengaplikasian mol dilakukan dengan cara mol dicampur dengan 1 liter air disetiap masing-masing konsentrasi mol. Setiap konsentrasi yang telah dicampur air diaplikasikan ke tanah/media tanam sebanyak 150 ml yang dilakukan pada pagi hari pukul 07:00-08:00 WIB sebanyak 75 ml dan sore hari pukul 16:00-17:00 WIB sebanyak 75 ml. Hasil penelitian berdasarkan hasil sidik ragam, menunjukkan bahwa mikroorganisme lokal rebung memiliki pengaruh yang sangat nyata terhadap pertambahan jumlah daun, berpengaruh nyata terhadap parameter tinggi, diameter dan berat kering akar, tidak berpengaruh nyata terhadap variabel berat kering tajuk dan rasio pucuk akar. Penggunaan mol rebung bambu selain penambahan unsur hara, juga digunakan sebagai dekomposer. Karena sumber unsur hara hanya berasal dari pupuk kandang sapi, penambahan pupuk NPK dilakukan pada 1 minggu sebelum masa tanam. Kedua pupuk inilah yang kemudian di uraikan oleh MOL rebung bambu sebagai dekomposer. Berdasarkan hasil

penelitian yang dilakukan, dapat disimpulkan bahwa pemberian mikroorganisme lokal rebung bambu secara signifikan memberikan pengaruh sangat nyata pada jumlah daun gaharu, serta memberikan pengaruh nyata terhadap tinggi tanaman, diameter batang, dan berat kering akar. Namun, pemberian mikroorganisme ini tidak memberikan pengaruh yang nyata terhadap berat kering tajuk dan rasio pucuk akar tanaman gaharu. Konsentrasi pemberian mikroorganisme lokal rebung bambu terbaik terdapat pada m2, yaitu 20 ml/l.

Kata Kunci: Mikroorganisme Lokal, Rebung Bambu, Gaharu

ABSTRACT

Agarwood (*Aquilaria malaccensis* lamk) is one of the elite products of non-timber forest commodities known as the "golden tree" among many Indonesian people. This type of agarwood can be found in Bangladesh, Bhutan, India, Indonesia, Iran, Laos, Malaysia, Myanmar, the Philippines, Singapore, and Thailand. In Indonesia itself, agarwood can be found in almost all regions in Indonesia. Agarwood has suitable growing conditions with air temperatures of 24-35 C, humidity of 80-90%, and rainfall of 1,000-1,500 mm/year. The soil conditions suitable for this plant are podzolic types with humus-rich sandy loam/clay soil structures. The suitability of the land topography is at an altitude of 10-400 masl. The purpose of this study was to analyze the effect of bamboo shoot mol on the growth of agarwood seedlings and to determine the best concentration of bamboo shoot mol that supports the growth of these agarwood seedlings. The materials used in this study were agarwood seedlings. The materials used in this study were agarwood seedlings (*Aquilaria malaccensis* Lamk.), NPK Mutiara 16-16-16 fertilizer, podzolic topsoil, cow dung fertilizer, bamboo shoots, brown sugar, coconut water, rice washing water. The tools used were polybags (14 cm x 22 cm), hoes, machetes, meters, measuring instruments, and other tools related to the study. The method used in this study was a completely randomized design (CRD) with a single factor consisting of 5 levels of MOL concentration. The concentrations given consisted of: m1 = MOL Bamboo Shoots (10ml/L), m2 = MOL Bamboo Shoots (20ml/L), m3 = MOL Bamboo Shoots (30ml/L), m4 = MOL Bamboo Shoots (40ml/L), m5 = MOL Bamboo Shoots (50ml/L). Of the five treatments, 4 repetitions will be carried out, so that there are 20 experimental units. In one experimental plot consisting of 5 seedlings, so that the total required is 100 seedlings. Among the 5 seed samples, one of them becomes a destructive sample at the end of the study. Local Microorganism (MOL) treatment is carried out every 7 days after planting in polybags and watered after planting. The application of mol is done by mixing mol with 1 liter of water in each concentration of mol. Each concentration that has been mixed with water is applied to the soil/planting media as much as 150 ml which is done in the morning at 07:00-08:00 WIB as much as 75 ml and in the afternoon at 16:00-17:00 WIB as much as

75 ml. The results of the study based on the results of the analysis of variance, showed that local bamboo shoot microorganisms have a very significant effect on the increase in the number of leaves, have a significant effect on the parameters of height, diameter and dry weight of roots, have no significant effect on the variables of dry weight of the crown and the ratio of root shoots. The use of bamboo shoot mol in addition to adding nutrients, is also used as a decomposer. Since the source of nutrients only comes from cow manure, the addition of NPK fertilizer is carried out 1 week before planting. These two fertilizers are then decomposed by MOL bamboo shoots as decomposers. Based on the results of the study, it can be concluded that the provision of local bamboo shoot microorganisms significantly has a very real effect on the number of agarwood leaves, and has a real effect on plant height, stem diameter, and root dry weight. However, the provision of these microorganisms did not have a real effect on the dry weight of the crown and the ratio of the root shoots of the agarwood plant. The best concentration of local bamboo shoot microorganisms is found in m₂, which is 20 ml / l.

Keywords: Local Microorganisms, Bamboo Shoots, Agarwood