

ABSTRACT

THE EFFECT OF PROPAGULES CUTTING TO ASIATIC MANGROVE (*Rhizophora mucronata*) SEEDLING GROWTH

By

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Mangrove or asiatic mangrove is one of mangrove species that has the ability to protect the coastline against waves and sea breezes. Due to its advantages and purposes, particularly in defending the coastline from abrasion, therefore it is essential to propagate the species efficiently and effectively. The propagule cutting was a method to overcome the problem of seedling distribution due to the propagule size that is long and relatively heavy. The aim of the study was to determine the impact of propagule cutting toward the seedling growth of asiatic mangrove and to determine the appropriate cutting length that will deliver as good as uncut viability of propagule. The study was conducted in the greenhouse of agriculture faculty, University of Lampung, over the period of May to July 2014. The factorial RAL (Complete Random Design) with 6 treatments was employed as research method. The first treatment (P0) was uncut propagule in 60 cm (control), second treatment (P1) was cut propagule in 50 cm length, third treatment (P2) was cut propagule in 40 cm length, fourth treatment (P3) was cut propagule in 30 cm length, fifth treatment (P4) was cut propagule in 20 cm length, and sixth treatment (P5) was cut propagule in 10 cm length. Each experiment unit consists of 5 propagules trial and each treatment was repeated 5 times. The result

showed that propagules cutting has significantly affect toward the seedling growth of asiatic mangrove in parameters of seedling life percentation, seedling height, number of leaves, and root lenght. Uncut propagule significantly gave better growth in all parameters compare to other treatment.

Keyword : asiatic mangrove, propagules cutting, seedling growth, (*Rhizophora mucronata*)

ABSTRAK

PENGARUH PEMOTONGAN PROPAGUL TERHADAP PERTUMBUHAN SEMAI BAKAU HITAM (*Rhizophora mucronata*)

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Bakau hitam (*Rhizophora mucronata*) merupakan jenis mangrove yang memiliki kemampuan melindungi pesisir pantai dari gelombang besar dan angin laut. Dengan kegunaan dan keunggulan bakau hitam, terutama dalam mempertahankan pesisir pantai dari abrasi, maka perlu dilakukan upaya perbanyakan tanaman tersebut. Pemotongan propagul dalam upaya perbanyakan bibit merupakan salah satu metode dalam mengatasi permasalahan distribusi bibit ke lokasi penanaman agar lebih efektif dan efisien. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh pemotongan propagul terhadap pertumbuhan semai bakau hitam dan mengetahui pemotongan propagul yang tepat sehingga memiliki viabilitas yang sama baiknya dengan propagul yang tidak dipotong. Penelitian ini dilaksanakan di rumah kaca Fakultas Pertanian Universitas Lampung pada bulan Mei sampai Juli 2014 dengan menggunakan Rancangan Acak Lengkap (RAL) dengan 6 perlakuan. Perlakuan ke-1 (P_0) propagul dengan ukuran 60 cm (kontrol), perlakuan ke-2 (P_1) ukuran 50 cm, perlakuan ke-3 (P_2) ukuran 40 cm, perlakuan ke-4 (P_3) ukuran 30 cm, perlakuan ke-5 (P_4) ukuran 20 cm, perlakuan ke-6 (P_5) 10 cm. Setiap unit percobaan terdiri atas 5 propagul dan setiap perlakuan diulang 5

kali. Hasil penelitian ini menunjukkan pemotongan propagul berpengaruh nyata terhadap pertumbuhan semai bakau hitam pada parameter persentase hidup, tinggi semai, jumlah daun, dan panjang akar. Propagul bakau hitam yang tidak dipotong menunjukkan hasil pertumbuhan yang paling baik.

Kata kunci: bakau hitam (*Rhizophora mucronata*), pemotongan propagul, pertumbuhan semai