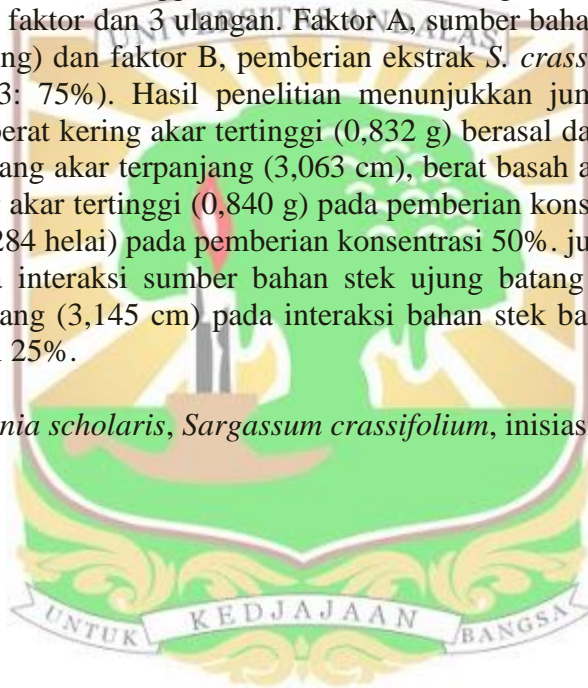


## ABSTRAK

Penelitian pengaruh ekstrak *Sargassum crassifolium* (J. Agardh) dan berbagai sumber bahan stek dalam menginisiasi akar stek Pulau *Alstonia scholaris* (L.) R. Br. sebagai upaya penyediaan bibit untuk reklamasi lahan kritis telah dilakukan dari bulan Oktober sampai dengan Desember 2015 di Lubuk Alai, Kabupaten 50 Kota dan Laboratorium riset Fisiologi Tumbuhan Jurusan Biologi Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Andalas, Padang. Penelitian bertujuan untuk mengevaluasi pengaruh ekstrak *S. crassifolium* dengan konsentrasi berbeda, berbagai sumber bahan stek dan interaksi kedua faktor tersebut terhadap induksi akar stek Pulau. Penelitian ini menggunakan metoda Rancangan Acak Lengkap (RAL) Faktorial dengan 2 faktor dan 3 ulangan. Faktor A, sumber bahan stek ( a1: pangkal, a2: tengah, a3: ujung) dan faktor B, pemberian ekstrak *S. crassifolium* (b0: 0%, b1: 25%, b2: 50%, b3: 75%). Hasil penelitian menunjukkan jumlah akar terbanyak (3,967 helai) dan berat kering akar tertinggi (0,832 g) berasal dari bahan stek bagian ujung batang. Panjang akar terpanjang (3,063 cm), berat basah akar tertinggi (1,438 g) dan berat kering akar tertinggi (0,840 g) pada pemberian konsentrasi 25%. Jumlah akar terbanyak (4,284 helai) pada pemberian konsentrasi 50%. jumlah akar terbanyak (5,840 helai) pada interaksi sumber bahan stek ujung batang dengan konsentrasi 50%. Akar terpanjang (3,145 cm) pada interaksi bahan stek bagian pangkal batang dengan konsentrasi 25%.

**Kata kunci :** *Alstonia scholaris*, *Sargassum crassifolium*, inisiasi akar, sumber stek



## ABSTRACT

The study about the effect of *Sargassum crassifolium* (J. Agardh) and various resources of material cuttings in order to initiate the root of *Alstonia scholaris* (L.) R. Br. cuttings in an effort to provide the plants for the reclamation of the degraded lands. The research was conducted from October until December 2015 at Lubuk Alai, Kabupaten 50 Kota and Plant Physiology Laboratory of Biology Department, Faculty of Mathematics and Natural Science, Andalas University, Padang. The research was aimed to evaluate the effect *S. crassifolium* extract with different concentrations, sources of material cuttings and interaction of both factors to root induction Pulai cuttings. The research used Complete Randomized Design (CRD) factorial with two factors and 3 replications. Factors A were material cuttings (a1: basal, a2: middle, a3: apical) and factors B were concentration *S. crassifolium* (b0: 0%, b1: 25%, b2: 50%, b3: 75%). The result showed that the highest number of roots (3.967 pieces) and the highest dry weight of roots (0.832 g) were resulted from the apical cutting materials. It was also found that the longest length of roots was (3.036 cm), the highest fresh weight of roots (1.438 g) and the highest dry weight of the roots (0.840 g) were resulted from from concentration 25% of *S. crassifolium*. The highest number of roots (4.284 pieces) were resulted from the application of concentration 50% of *S. crassifolium*. Interaction of apical cuttings material and concentration 50% of *S. crassifolium* had the highest number of roots (5.840 pieces) and the interaction of basal cuttings material with concentration 25% of *S. crassifolium* had the longest roots (3.145 cm).

**Key word:** *Alstonia scholaris*, *Sargassum crassifolium*, root initiation, material cuttings