

**PERTUMBUHAN SEMAI NYAMPLUNG
DENGAN PEMBERIAN HUMUS AKTIF PADA BERBAGAI MEDIA TANAH
AREA BEKAS TAMBANG TIMAH RAKYAT**

INTISARI

Aktivitas penambangan timah menjadi salah satu penyebab deforestasi hutan di Indonesia yang berdampak menurunkan kualitas tanah seperti penambangan semprot dan ponton yang dilakukan masyarakat secara sederhana. Sumber material penambangan semprot berasal dari darat yang disemprot untuk pelarutan agar dapat dipompa guna pengayakan, sedangkan sumber penambangan ponton berasal dari material dasar kolong yang dilarutkan kemudian dipompa untuk pengayakan. Penelitian ini bertujuan untuk (a) mengetahui kualitas tanah area tambang timah rakyat sebelum dan setelah diberi Humus Aktif dan (b) mengetahui dosis pemberian Humus Aktif yang optimal bagi pertumbuhan tanaman nyamplung pada tanah area tambang timah rakyat.

Penelitian dilakukan di rumah kaca berupa pemberian bahan organik pembenah tanah berupa Humus Aktif/Pupuk SROP pada media tanah *tailing* timah serta penanaman nyamplung (*Callophyllum inophyllum* L.) selama 4 bulan. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dua faktor, yakni media semai dan dosis humus aktif/pupuk SROP. Faktor media semai terdiri dari: Tanah Hutan, *Tailing* Timah Semprot, dan *Tailing* Timah Ponton. Pada faktor dosis pupuk SROP terdiri: kontrol, dosis 10%, 20%, dan 30%. Parameter yang diamati berupa (a) karakteristik tanah sebelum dan setelah penambangan, (b) perubahan karakteristik tanah *tailing* timah setelah pemberian Humus Aktif, dan (c) pertumbuhan nyamplung pada media semai yang telah diberi Humus Aktif.

Penambangan timah berdampak pada penurunan kualitas tanah akibat penambangan timah berupa dominasi fraksi pasir, penurunan KPK tanah, dan NPK tanah, serta peningkatan kadar Fe dan Cu tanah yang bersifat racun bagi tanaman. Seiring pertambahan dosis Humus Aktif/Pupuk SROP maka semakin meningkatkan kesuburan tanah berupa peningkatan KPK tanah, peningkatan NPK tanah, serta menurunkan dampak keracunan dari Fe, Al, Cd, dan Cu serta meningkatkan pula laju pertumbuhan tinggi tanaman nyamplung dengan dosis optimal yaitu 30%, meskipun dengan pertumbuhan yang belum maksimal akibat keracunan Al dan Cd serta kekurangan unsur B dan Na.

Kata kunci: Penambangan timah, humus aktif, nyamplung, reklamasi, degradasi lahan

**THE GROWTH OF NYAMPLUNG SEEDLINGS
SUPPLEMENTED WITH ACTIVE HUMUS IN VARIOUS SOIL MEDIA
ORIGINATED FROM FORMER TIN FOLK MINING AREA**

ABSTRACT

Tin mining activity is one of the causes of deforestation in Indonesia. The simple gravelpump and pontoon mining process carried out by the community degrades soil quality. The source of gravelpump mining material originates from the land which is sprayed as a solvent so that the pontoon material can be pumped for sieving. On the other hand, the source of pontoon mining material comes from the pit base material which is dissolved and then pumped for sieving. This study aims to (a) determine the quality of soil media originated from former tin folk mining area before and after supplemented with Active Humus (b) find the optimal dose of Active Humus addition for nyamplung growth on soil media originated from former tin folk mining area.

The research was carried out in a greenhouse by giving soil organic enhancer, namely Active Humus/SROP (Slow Release Organic Paramagnetic) fertilizer, on the tin tailing soil media and planting nyamplung (*Callophyllum inophyllum* L.) for 4 months. This study used the two-factor completely randomized design (CRD). The two factors were seedling media and the dose of Active Humus/SROP fertilizer. The seedling media factors consisted of: Forest Soil, Gravelpump Tin Tailing, and Pontoon Tin Tailing. The SROP fertilizer dose factors consisted of: control, 10% dose, 20%, and 30%. The parameters observed including (a) soil characteristics before and after mining, (b) changes in tin tailing soil characteristics after being given Active Humus, and (c) the growth of nyamplung in soil media originated from mining area which had supplemented with Active Humus.

The results of this study are a decrease in soil quality due to tin mining which was indicated by the dominance of sand fraction, a decrease in soil CEC (Cation-Exchange Capacity) levels, and a decrease in soil NPK levels, as well as an increase in Fe and Cu levels which is poisonous for plants. The more Active Humus/SROP fertilizers doses have an impact on increasing soil fertility by the increase in soil CEC, as well as an increase in soil NPK, and a decrease in Fe, Al, Cd and Cu levels which increased the rate of height growth of nyamplung plants by 30%, despite the growth was not maximum yet due to Al and Cd poisoning and also the lack of B and Na elements.

Keywords: Tin mining, active humus, nyamplung, reclamation, land degradation