

**PERTUMBUHAN PELAWAN (*Tristaniopsis merguensis* Griff. )  
PADA TANAH KAOLIN DAN KUARSA  
BEKAS TAMBANG TIMAH DI PULAU BANGKA**

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**Abstrak**

Kegiatan penambangan mengakibatkan deforestasi dan degradasi lahan, sehingga menghilangkan tanah asal dan menyisakan tanah tua berupa kaolin dan kuarsa. Upaya reklamasi pada lahan tambang dapat dilakukan melalui penanaman jenis lokal yang sesuai seperti pelawan (*Tristaniopsis merguensis*). Penelitian ini bertujuan untuk mengetahui karakteristik fisik dan kimia tanah kaolin dan kuarsa serta mengetahui pertumbuhan pelawan pada tanah kaolin dan kuarsa bekas tambang timah.

Penelitian ini dilakukan di lahan reklamasi PT. Timah, Kecamatan Merawang, Provinsi Bangka Belitung dengan membuat petak ukur seluas 20 m x 20 m sebanyak tiga kali ulangan petak ukur yang berisi tanaman pelawan berumur 1 tahun 8 bulan dengan jarak tanam 2 m x 2 m. Sampel tanah diambil pada bulan Agustus 2018, sedangkan sampel tanaman diambil pada bulan Agustus 2018 dan April 2019. Karakteristik tanah yang diuji adalah tekstur, Berat Volume (BV), Berat Jenis (BJ), porositas, pH, potensial redoks (Eh), Kapasitas Pertukaran Kation (KPK), N, P dan K. Pengukuran tanaman meliputi tinggi, diameter, biomassa, dan kadar klorofil daun. Data tanah dianalisis menggunakan Uji Anova dua faktor dan data tanaman dianalisis menggunakan Uji t.

Hasil penelitian menunjukkan bahwa sifat fisik tanah kuarsa (berat volume dan porositas) lebih baik dibandingkan dengan kaolin. Sementara itu, meskipun memiliki sifat kimia tanah (kapasitas tukar kation dan ketersediaan N, P, dan K) yang tinggi, tanah kaolin memiliki sifat fisik tanah yang menjadi pembatas bagi pertumbuhan tanaman. Hasil penelitian juga menunjukkan bahwa nilai persen hidup, tinggi, diameter, biomassa, dan kadar klorofil pelawan pada tanah kuarsa lebih tinggi dibandingkan dengan kaolin. Dengan demikian, dapat disimpulkan bahwa pelawan adaptif pada lahan bekas tambang timah yang didominasi oleh tekstur pasir.

Kata kunci: Bekas tambang timah, revegetasi, kaolin, kuarsa, pertumbuhan pelawan (*Tristaniopsis merguensis*)

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## **THE GROWTH OF PELAWAN (*Tristaniopsis merguensis* Griff.) ON KAOLIN AND QUARTZ SOILS IN TIN EX- MINING AREA IN BANGKA ISLAND**

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### **ABSTRACT**

Mining activities caused deforestation and forest degradation, resulting in the loss of land's original soil and leaving old soil in the form of kaolin and quartz. Reclamation efforts on those areas can be done by planting a appropriate plant species like a *pelawan* (*Tristaniopsis merguensis*). The study aims to determine the physical and chemical characteristics of kaolin and quartz soils and to examine the growth of *pelawan* in kaolin and quartz soils in tin ex-mining.

This research was carried out in Reclamation of PT. Timah, Merawang district, Bangka Belitung Inland by making 3 plots of 20 m x 20 m in size. Soil samples were taken in August 2018 and plant samples were taken twice in August 2018 and April 2019. The soil characteristics tested are texture, Weight Volume (WV), density, porosity, pH, potential redox (Eh), Cation Exchange Capacity (CEC), N, P, and K, whereas plant parameters measured were height, diameter, biomass, and leaf chlorophyll content. Soil data were analyzed by two factor Anova Test and plant data were analyzed using t Test.

The results showed that the physical properties of quartz soil (volume weight and quartz porosity) were better than kaolin. Although chemical properties (Cation Exchange Capacity and N, P, and content) of kaolin soil were higher than quartz but its low physical properties become limiting factors for plant growth. The results also show that the survival rate, height, diameter, biomass, and chlorophyll content of *pelawan* in quartz were higher than those in kaolin soil. Therefore, it can be concluded that *pelawan* were adaptive to grow in tin ex-mining land dominated by sandy textures.

**Keywords:** Tin ex-mining area, revegetation, kaolin, quartz, *pelawan* growth (*Tristaniopsis merguensis*)

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