KAJIAN P DAN K PADA LAHAN TAMBANG BATU GAMPING DI CV. SIPALAKKI SAROHA RAJA PARGODUNG PURBA, DOLOKSANGGUL SUMATERA UTARA

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ABSTRAK

CV Sipalakki mengelola tambang batu gamping seluas 49,3 ha di Doloksanggul, Humbang Hasundutan. Secara geologis, lokasi penelitian berada dalam wilayah sebaran Formasi Tapanuli. Penambangan terbuka menggunakan alat berat berpotensi menurunkan kualitas tanah. Daerah ini didominasi tanah podzolik yang bersifat asam. Penelitian ini bertujuan mengkaji kadar fosfor (P) dan kalium (K) tanah di sekitar area tambang menggunakan metode survei dan analisis laboratorium. Sampel diambil secara purposive sebanyak 9 titik, 3 di lahan belum ditambang, 3 di lahan berhenti 1 tahun, dan 3 di lahan berhenti 2 tahun. Hasil menunjukkan bahwa lahan belum ditambang memiliki pH 5,88, C-Organik 3,07%, KPK 20,64 cmol (+)/kg, P-total 14,25 mg/100g, dan K-total 121,53 mg/100g. Lahan bekas tambang 1 tahun mengalami penurunan C-Organik (0,35%) dan P-total (7,32 mg/100g), namun K-total meningkat (214,62 mg/100g). Pada lahan bekas tambang 2 tahun, pH meningkat (7,56), C-Organik naik (0,67%), namun K-total menurun drastis (15,14 mg/100g). Secara keseluruhan, lahan yang belum ditambang memiliki kualitas tanah terbaik, terutama dalam hal kesuburan. Lahan yang sudah berhenti 2 tahun menunjukkan tanda pemulihan, meski belum kembali ke kondisi awal.

Kata Kunci: Tanah bekas tambang, tambang batu, penurunan kualitas tanah, rehabilitas

P and K STUDY OF A LIMESTONE MINING LAND AT CV. SIPALAKKI SAROHA RAJA, PARGODUNG PURBA, DOLOKSANGGUL NORTH SUMATERA

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ABSTRACT

CV Sipalakki manages a 49.3 ha limestone mine in Doloksanggul, Humbang Hasundutan. Geologically, the study location is within the distribution area of the Tapanuli Formation. Open-pit mining using heavy equipment has the potential to degrade soil quality. This area is dominated by acidic podzolic soil. This study aims to assess the levels of phosphorus (P) and potassium (K) in the soil around the mine area using survey methods and laboratory analysis. Samples were taken purposively at 9 points, 3 in unmined land, 3 in land that has stopped for 1 year, and 3 in land that has stopped for 2 years. The results showed that the unmined land had a pH of 5.88, C-Organic 3.07%, CEC 20.64 cmol (+)/kg, P-total 14.25 mg/100g, and K-total 121.53 mg/100g. The 1-year-old mined land experienced a decrease in organic carbon (0.35%) and total phosphorus (7.32 mg/100g), but total potassium (214.62 mg/100g) increased. In the 2-year-old mined land, pH increased (7.56), organic carbon (0.67%) increased, but total potassium decreased drastically (45.43 mg/100g). Overall, the unmined land had the best soil quality, especially in terms of fertility. The land that had been mined for 2 years showed signs of recovery, although it had not yet returned to its initial condition.

Keywords: Used mining soil, stone quarry, soil quality decline, rehabilitation