

ABSTRAK

ANALISIS PENGARUH JENIS TANAH DAN KERAPATAN TANAMAN RUMPUT VETIVER TERHADAP LAJU EROSI

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ABSTRAK

Erosi tanah merupakan salah satu masalah utama dalam pengelolaan sumber daya alam, terutama pada lahan miring yang rentan terhadap degradasi. Erosi tanah menyebabkan hilangnya penurunan produktivitas lahan pertanian, lapisan tanah subur, dan sedimentasi pada badan air. Perlu diketahui bagaimana pengaruh jenis tanah dan kerapatan tanaman terhadap laju erosi. Pada penelitian ini ada dua jenis tanah yang digunakan yaitu tanah gambut dan tanah lempung yang di mana masing-masingnya memiliki tekstur yang berbeda. Penelitian ini menganalisis pengaruh jenis tanah, kerapatan tanaman rumput vetiver dan intensitas curah hujan terhadap debit limpasan lalu laju erosi dihitung dengan menggunakan metode perhitungan USLE dan menganalisis hubungan antara jenis tanah, kerapatan tanam rumput vetiver serta intensitas hujan dalam mengendalikan laju erosi. Hasil penelitian menunjukkan menunjukkan intensitas hujan, jarak tanam dan jenis tanah berpengaruh terhadap laju erosi. Debit limpasan tertinggi dihasilkan pada jenis tanah gambut dengan intensitas hujan 0,37 liter/menit dan jarak tanam 10 cm, sementara debit limpasan terkecil dihasilkan pada tanah lempung dengan intensitas hujan 0,275 liter/menit dengan jarak tanam 10 cm

Kata kunci : Erosi, Rumput Vetiver, Tanah Gambut, Tanah Lempung

ABSTRACT

ANALYSIS OF THE EFFECT OF SOIL TYPE AND VETIVER GRASS PLANT DENSITY ON EROSION RATE

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ABSTRACT

Soil erosion is one of the main problems in natural resource management, especially on sloping land that is vulnerable to degradation. Soil erosion causes a decrease in agricultural land productivity, loss of fertile soil layers, and sedimentation in water bodies. It is necessary to understand how soil types and plant density affect the rate of erosion. In this study, two types of soil were used, namely peat soil and clay soil, each having different textures. This research analyzes the influence of soil type, vetiver grass planting density, and rainfall intensity on runoff discharge, while the erosion rate is calculated using the USLE calculation method and analyzes the relationship between soil type, vetiver planting density, and rainfall intensity in controlling the erosion rate. The results of the study show that rainfall intensity, planting distance, and soil type affect the rate of erosion. The highest runoff discharge was produced on peat soil with a rainfall intensity of 0.37 liters/minute and a planting distance of 10 cm, while the lowest runoff discharge was produced on clay soil with a rainfall intensity of 0.275 liters/minute and a planting distance of 10 cm

Keywords: *Peat, Vetiver Grass, Soil Erosion, Clay Soil.*