

**POTENSI EROSI ANGIN BERDASARKAN PENDEKATAN STABILITAS
AGREGAT TANAH DENGAN METODE USAS (*Soil Aggregate Stability*)
PADA LAHAN SAWAH SRI (*System of Rice Intensification*) DAN
KONVENSIONAL DI DAERAH ISTIMEWA YOGYAKARTA**

INTISARI

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Pada lahan sawah pasca panen tanpa adanya penutupan lahan, erosi dapat terjadi diakibatkan oleh besarnya terpaan angin pada permukaan tanah. Tanah yang tidak memiliki agregasi yang baik cenderung tidak mampu mempertahankan agregasinya saat diterpa angin sehingga menimbulkan terjadinya erosi angin. Penelitian dilakukan dengan mengukur sifat fisik serta stabilitas agregat tanah pada lahan pertanian dengan manajemen SRI dan konvensional di Daerah Istimewa Yogyakarta. Pengukuran stabilitas agregat tanah dilakukan menggunakan metode USAS (*Ultrasound Soil Aggregate Stability*). Analisis potensi erosi angin ditinjau dari tabel prediksi oleh USDA yang diadaptasi dari bentuk fungsional persamaan erosi angin yang dikemukakan oleh Woodruff dan Siddoway yaitu $q = f [(soil\ properties), (flow\ Properties)]$. Stabilitas agregat pada lahan sawah SRI lebih stabil dibandingkan lahan sawah konvensional. Berdasarkan hasil penelitian diperoleh bahwa semakin tinggi nilai stabilitas agregat tanah sampel maka semakin rendah kepekaan tanah terhadap erosi angin. Nilai stabilitas agregat tertinggi adalah pada lahan pertanian SRI di Kabupaten Kulon Progo sebesar 58,44 % dengan potensi erosi angin sebesar 146 Mg/ha/th. Nilai stabilitas agregat terendah adalah pada lahan pertanian konvensional di Kabupaten Bantul sebesar 3,41 % dengan potensi erosi angin sebesar 586,8 Mg/ha/th.

Kata kunci : Erosi, Angin, Sawah, Agregat

THE POTENTIAL OF WIND EROSION BASED ON SOIL AGGREGATE STABILITY ON SRI (Soil Aggregate Stability) AND CONVENTIONAL USING USAS (Ultrasound Soil Aggregate Stability) METHOD ON AGRICULTURAL LAND IN SPECIAL REGION OF YOGYAKARTA

ABSTRACT

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In post-harvest paddy fields without land cover, erosion can occur due to the amount of wind exposure on the soil surface. Grounds that do not have good aggregation tend to be unable to maintain its aggregation when hit by wind, causing wind erosion. The study was conducted by measuring the physical properties and soil aggregate stability on agricultural land with SRI and conventional management in Special Region of Yogyakarta. Measurement of soil aggregate stability was done using USAS method (Ultrasound Soil Aggregate Stability). Analysis of the potential of wind erosion is viewed from the USDA predicted table adapted from the functional form of wind erosion equations proposed by Woodruff and Siddoway ie $q = f [(soil\ properties), (flow\ Properties)]$. The aggregate stability in SRI paddy fields is more stable than conventional rice fields. Based on the result of research, it is found that the higher the soil aggregate stability value of the soil, the lower the sensitivity of the soil to wind erosion. The highest aggregate stability value is on SRI farm in Kulon Progo Regency of 58.44% with the potential of wind erosion of 146 Mg / ha / yr. The lowest aggregate stability was on conventional farmland in Bantul Regency at 3.41% with wind erosion potential of 586.8 Mg / ha / yr.

Keywords : Erosion, Wind, Rice Field, Aggregate