

KAJIAN DEBIT SUSPensi DI HUTAN PINUS
(Studi Kasus DTA Gajah Mungkur, RPH Jati, BKPH Baturetno, KPH
Surakarta, Wonogiri, Jawa Tengah)

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INTISARI

Penanaman tanaman campur (*mix planting*) yang terdiri dari kopi, lada, dan pusa dengan luas lahan penanaman sekitar 26,6 ha di daerah tangkapan air (DTA) Gajah Mungkur pada kelerengan yang terjal, umurnya masih sangat muda (2 tahun) dan belum dapat menutupi lahan dengan baik, sehingga erosi dan sedimentasi yang ditimbulkan akan besar.

Tujuan dalam penelitian ini adalah menghitung debit suspensi rerata harian pada daerah pola tanam campur (*mix planting*) dan memprediksi besarnya rerata tebal erosi melalui parameter debit suspensi. Metode yang digunakan dalam penelitian ini adalah *velocity area methode* dengan *current meter* sebagai alat pengukur kecepatan arus sungai, *depth integrating methode* dengan *suspended sampler* sebagai alat untuk mengambil sampel muatan suspensi, *discharge rating curve* untuk memprediksi debit aliran setiap tinggi muka air, *suspended discharge rating curve* untuk memprediksi debit suspensi setiap tinggi muka air, persamaan garis hubungan tebal hujan dengan debit aliran rerata harian, dan $E = \frac{Q_{st}}{A \times \rho}$,

rumus untuk memprediksi tebal erosi.

Hasil penelitian menunjukkan bahwa debit suspensi rerata harian dan rerata tebal erosi yang terjadi pada daerah tanam campur (*mix planting*) pada 3 Februari-31 Maret 2005 masing-masing adalah 8,671 ton/hari/ha dan 0,030 mm/hari.

Kata Kunci : Tanam Campur, Debit Aliran, Debit Suspensi, Erosi.

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**THE STUDY OF SUSPENDED DISCHARGE AT PINE FOREST
(Case Study at Gajah Mungkur Catchment Area, RPH Jati, BKPH
Baturetno, KPH Surakarta, Wonogiri, East Java)**

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ABSTRACT

The planting of mix planting forest at Gajah Mungkur catchment area composed of kopi, lada, and puspa. The board of mix planting forest area was about 26,6 ha. The age of mix planting forest was still young (2 years) and planted at steep slope. The young mix planting forest had not covered ground completely yet, so it would make greater erosion and sedimentation.

The objective of the study was to calculate the daily average of the suspended discharge at mix planting forest area and to predict the daily average of the erosion thickness through parameter of suspended discharge. The methods used in this study were (1) the velocity area method using a current meter as a tool to measure the velocity of the water flow, (2) the depth integrating methode using a suspended sampler as a tool to collect the suspended sediment, (3) the discharge rating curve to predict the stream discharge at the water level stages, (4) the suspended discharge rating curve to predict the suspended discharge at the water laevel stages, (5) the equation of relationship between the dense of rainfall and the daily average of stream discharge, (6) $E = \frac{Q_{st}}{A \times \rho}$, as a formula to predict the erosion thickness.

The results of the study showed that the daily average of the suspended discharge and the daily average of the erosion thickness at mix planting forest area on 3 February-31 March 2005 were 8,671 ton/day/ha and 0,030 mm/day.

Key Words : Mix Planting, Stream Discharge, Suspended Discharge, Erosion.

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