

**ANALISIS KEBUTUHAN AIR TANAMAN DURIAN  
(DURIO ZIBETHINUS MURR.)**

**DI KEBUN BUAH NAWUNGAN DESA SELOPAMIORO, KECAMATAN  
IMOGIRI, KABUPATEN BANTUL.**

**INTISARI**

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Penelitian ini dilakukan untuk menyusun neraca air, menghitung kebutuhan air tanaman, dan menentukan koefisien tanaman ( $K_c$ ) tanaman durian. Penelitian ini berlokasi di kebun durian Nawungan, Desa Selopamioro, Kecamatan Imogiri. Bahan penelitian meliputi deskripsi kebun buah dan monografi desa, peta Rupa Bumi Indonesia skala 1:25.000 dan data iklim aktual. Pengambilan data iklim, curah hujan, kadar lengas, dan *surface runoff* menggunakan metode purposive sampling. Evapotranspirasi acuan ( $ET_0$ ) dihitung dengan analisis Penman-Monteith. Analisis neraca air untuk menentukan kebutuhan air tanaman aktual ( $ET_a$ ) dan menentukan nilai koefisien tanaman ( $K_c$ ).

Hasil penelitian menunjukkan kebun buah Nawungan tergolong tipe iklim D (hujan sedang) menurut klasifikasi iklim Schmidt-Ferguson dengan data hujan aktual. Nilai curah hujan dan irigasi selama 2 bulan pengamatan sebesar 116,65 mm, dan nilai *surface runoff* sebesar 0,058 mm. Dari pengamatan iklim, tanah dan air yang dilakukan selama dua bulan diperoleh kebutuhan tanaman aktual ( $ET_a$ ) sebesar 3,31 mm/hari. Nilai  $K_c$  Prediksi diperoleh dari hubungan linier antara  $ET_0$  dan  $ET_a$  Prediksi sebesar 0,6094.

Kata kunci : kebutuhan air tanaman, neraca air, evapotranpirasi acuan, koefisien tanaman.

**CROP WATER REQUIREMENT ANALYSIS OF DURIAN TREES  
(DURIO ZIBETHINUS MURR.)  
AT NAWUNGAN ORCHARD, SELOPAMIORO VILLAGE, IMOIRI  
SUB-DISTRICT, BANTUL REGENCY.**

**ABSTRACT**

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This research was conducted to develop water balance, calculate the water requirement of plants, and determine the coefficient of trees ( $K_c$ ) of durian plants. This research was located in Durian Nawungan orchard, Selopamioro Village, Imogiri Sub-district. The research materials included descriptions of fruit orchards and village monographs, 1: 25.000 Indonesian Earth map and actual climate data. Climate data collection, rainfall, moisture content, and surface runoff using purposive sampling method. Evapotranspiration reference ( $ET_0$ ) was calculated by Penman-Monteith analysis. Water balance analysis was used to determine actual crop water requirement ( $ET_a$ ) and determine the value of crop coefficient ( $K_c$ ).

The results showed that Nawungan orchard belonged to climate type D (moderate rain) according to Schmidt-Ferguson climatic classification with actual rainfall data. Total rainfall and irrigation was 116,65 mm for 2 months observation, surface runoff and crop water requirement were 0,058 mm/day and 3.31 mm/day. From the observation of climate, soil and water conducted for two months obtained actual crop water requirement ( $ET_a$ ) of 3,31 mm / day. Value of  $K_c$  Prediction was obtained from the linear relationship between  $ET_0$  and  $ET_a$  Prediction of 0,6094.

**Keywords:** crop water requirements, water balance, reference evapotranspiration, crop coefficient.