PERHITUNGAN KEBUTUHAN AIR TANAMAN KELENGKENG

(Dimocarpus longan Lour.)

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

ABSTRAK

Oleh:

Nadya Andriyani Rahmadi
15/385466/TP/11335

Penelitian ini dilakukan untuk mengukur evapotranspirasi aktual (ETa), menghitung ETo, dan menentukan koefisien tanaman (Kc) Kelengkeng (*Dimorcapus longan Lour*.) yang dibudidayakan di Kebun Buah Nawungan, Desa Selopamioro, Kecamatan Imogiri. Neraca air skala plot digunakan sebagai dasar menghitung ETa, dengan komponen input berupa hujan dan irigasi, sedangkan output adalah ETa, simpanan lengas (ΔSM), dan limpasan permukaan (SRO). Komponen limpasan permukaan diukur dengan menggunakan bak penampung dan kadar lengas tanah menggunakan metode gravimetri. Stasiun iklim otomatis terpasang di dalam Kebun Buah Nawungan untuk mencatat data curah hujan, kecepatan angin, kelembaban udara, dan intensitas radiasi matahari. Data iklim selanjutnya digunakan untuk menghitung nilai evapotranspirasi acuan (ETo) dengan metode Penman-Monteith. Karena sistem agroforestri dan *mix cropping*, tanaman Kelengkeng hanya ditanam di sela-sela tanaman musiman dan di antara tanaman kayu maka Kc tipe dual. Nilai curah hujan selama Februari – Maret 2019 tercatat 640 mm, dan nilai *surface runoff* sebesar 0,08 mm. Nilai evapotranspirasi acuan (ETo) sebesar 5,76 mm/hari dan kebutuhan tanaman aktual (ETa) sebesar 7,90 mm/hari. Nilai koefisien tanaman (Kc) diperoleh 0,30.

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

CROP WATER REQUIREMENT CALCULATIONS OF LONGAN

(Dimocarpus longan Lour.)

IN NAWUNGAN ORCHARD, SELOPAMIORO VILLAGE, IMOGIRI SUB-DISTRICT, BANTUL-D I YOGYAKARTA

ABSTRACT

By:

Nadya Andriyani Rahmadi
15/385466/TP/11335

This research was aimed to measure actual evapotranspiration, to determine of water requirement and crop coefficient (Kc) of longan (*Dimorcapus longan Lour.*) was cultivated in Longan Nawungan orchard, Selopamioro Village, Imogiri Sub-district. Plot scale of water balance was applied to determine ETa, with input components were rainfall and irrigation, while output were ETa, water storage (ΔSM), and surface runoff (SRO). Components of runoff was measured using tank and the moisture content was measured using gravimetry method. Automatic weather station was installed in Nawungan orchard to record rainfall, wind speed, air humidity, and intensity of solar radiation. Later, the climatic data were used to calculate the reference evapotranspiration (ETo) using Penman-Monteith method. Due to agroforestry and mix cropping system, longan trees were cultivated among seasonal crops and other trees, then the dual crop coefficient (Kc) was preffered. During February-Maret 2019, the value of rainfall and surface runoff were 640 mm during observation period and 0,08 mm, respectively. The reference evapotranspiration (ETo) and actual evapotranspiration (ETa) were 5,76 mm/day and 7,90 mm/day, respectively. The crop coefficient of longan in the site study area was 0,30.

Keywords : crop water requirement, water balance, the reference evapotranspiration, crop coefficient