以熱收支法探討平台階段之柑橘果園蒸發散量

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摘 要 本研究自 2012 年 11 月 3 日至 2013 年 8 月 28 日止,於嘉義縣大林鎮東側丘陵地所闢建平台階段柑橘果園，設置一 4m 高之氣象觀測塔，分別觀測果樹冠層上氣溫、相對濕度、風速、風向及淨輻射量，果園近地表土層之地溫及地中熱流量等氣象因子，觀測所得數據配合熱收支法來估算平台階段柑橘果園之蒸發散量，初步得知：冬季期間柑橘果實有增加蒸散作用使其蒸發散量高於其他各季，且果園近地表土層呈現散熱狀態，易有逆溫狀態。柑橘果園之蒸發散量介於 1~8mm，平均值為 4.3mm。

關鍵詞：蒸發散量、平台階段、柑橘。

To Estimate Evapotranspiration of Citrus Orchard on Bench Terrace by Heat Budget Method

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ABSTRACT This study was focus on the estimation of evapotranspiration on the bench terrace for the citrus orchard. The experimental site was located at the hill of eastern Dalin Township, Chiayi County. All the meteorological sensors included as: air temperature, relative humidity, wind speed, wind direction and net radiation above orchard canopy, earth temperature and soil heat flux under ground surface had set in a meteorological tower with 4 meter height, and measured from November 3, 2012 to August 28, 2013. The result had shown as follow, the evapotranspiration of citrus orchard during the winter season was higher than other seasons, since the fruitage would increase transpiration. At the same time, the outgoing earth energy could result radiation temperature inversion at ground surface in the orchard. The evapotranspiration of citrus orchard on bench terrace was range 1 to 8 mm, and the mean value was 4.3 mm.

Key Words : Evapotranspiration, bench terrace, citrus orchard.

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