



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Irrigation Scheduling of Drip-Irrigated Tomatoes Using Class A Pan Evaporation

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Abstract: This study was carried out to investigate the irrigation schedule of drip-irrigated tomatoes (*Lycopersicon esculentum* cv. Dual Large, F 1) using Class A pan evaporation. Tomatoes plants were grown in a clay soil in the experimental fields of the Research Institute of Rural Services in Eskişehir between 1998 and 2000. Irrigation water was applied as a certain ratio of Class A pan evaporation ($k_{pc} = 0.50, 0.75, 1.00,$ and 1.25) with different irrigation intervals (2, 4, and 6 days). Significant differences in fruit yields were obtained between the treatments, except for in 1998. Maximum marketable fruit yield was found at the treatment level of 1.00 of k_{pc} and 4-day irrigation intervals. For this treatment, fruit yield ranged from 116.6 to 176.3 t ha⁻¹ depending on the climatological and soil conditions according to the experimental years. Hence, ground variety tomatoes grown in the field under Eskişehir conditions should be irrigated at 4-day intervals and the irrigation water should be determined using k_{pc} at 1.00 in combination with cumulative evaporation from a Class A pan. For this program, average irrigation water applied, evapotranspiration, and water use efficiency (WUE) were determined to be 602 mm and 710 mm, and 23.8 kg m⁻³, respectively.

Key Words: irrigation, scheduling, tomatoes, drip, evaporation.

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