ABSTRACT

MSc Thesis

DETERMINATION OF IRRIGATION SCHEDULE AND AMOUNT OF WATER FOR APPLICATION IN DRIP-IRRIGATED VINEYARD USING A CLASS EVAPORATION PAN

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This study was carried out at Manisa Viticulture Research Institute in 2006 to aimed prepare irrigation schedule and determined amount of irrigation water use A class evaporation pan in drip irrigated Sultana grape variety vineyard.

This investigation was designed as 4 replications randomized block design and each replication is constituted 15 vines. Four different irrigation treatments were determined and treatments were combined with four different pan coefficients, irrigation intervals are 7 days.

Each treatments amount of water were respectively 73.46, 112.84, 152.23, and 191.61 mm and plant water consumptions were respectively 112, 153, 192 and 232 mm. The best irrigation treatment was determined Kpc2 0.75 in terms of the amount of water, plant water consumption, yield and quality criteria and different cost levels for Sultana grape variety in high trellis system vineyards. Treatment of Kpc2 was 35% than Kpc3 and 70% water saving than Kpc4 treatments. Yield values are for each treatment were obtained 10.08 kg/vine, 12.25 kg/vine, 11.96 kg/vine, 12.29 kg/vine respectively Kpc1, Kpc2, Kpc3, Kpc4.

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Key Words

Drip Irrigation, Sultana, Irrigation Schedule, Plant Water Consumption