

ABSTRACT

MSc Thesis

DRIP IRRIGATION OF CORN IN THE AYDIN REGION

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This research was conducted to determine the effect of different irrigation intervals and levels on grain yield and some yield quality parameters of popcorn in the Research and Application Farm of Faculty of Agriculture at Adnan Menderes University during the year of 2006.

Experiment was set up out in randomized plot design with two factors and three replications. In the trials, irrigation water was applied to corn as 40 %, 60 %, 80 %, 100 , % 120 and 0 % of evaporation from Class A Pan corresponding to 3- and 6-day irrigation frequencies.

The results revealed that irrigation intervals and levels affected the corn grain yield and the highest grain yields were obtained as 641,6 kg/da at full irrigation level of 100 % (K₄) of control plot and in 3 days of intervals. The amounts of applied irrigation water 563,0 mm and seasonal water consumption value 579,0 mm in the full irrigation treatment. Irrigation water was applied 19 times during the growing season in the suggested plots (K₄).

Irrigation intervals and the amount of irrigation water applied were both affected the plant height, leaf number per plant, ear diameter, ear length, kernel number per ear and kernel weight.

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Popcorn (*zea mays everta sturt.*), irrigation intervals, irrigation level, drip irrigation, quality parameters, yield response factor.