

***Investigation of Effects of Different Irrigation Schedules on Yield and Some Plant Growth Parameters of Second Crop Corn and Test of Ceres-Maize Crop Growth Simulation Model on Menemen Plane (The final report is not published)***

<b>Research Area</b>	Soil Water Resources and Environmental
<b>Research Program</b>	Increase of Water Use Efficiency
<b>Executive Institute</b>	International Agricultural Research and Training Centre
<b>Supporting Institute/s</b>	Ege University , Faculty of Agriculture, Department of Agricultural Structure and Irrigation
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<b>Research Period</b>	2013 – 2015
<p><b>Project Summary:</b> The studies on climate change and the drought scenarios displays that the climate change threatened agricultural activities seriously on a global scale and it had bad effect on water resources and irrigation. The changes on agricultural production and yield because of the drought impact caused by the increase in temperature as a result of global warming in the latitudes where Turkey is located has to be studied. In recent years revealing the possible results of drought in the complicated process between atmosphere-plant-soil and using the simulation models in this process has made headway. In this context studying on the size of relationship between irrigation and the growth and yield parameters of the plant and analyzing with simulation models is so important for improving water use efficiency and helping the decision makers.</p> <p>However, in recent years the studies related to the methods of irrigation programming indicates that the plant based models give more reliable results compared to other programming techniques. The subject of irrigation programming based on the relationship between plant water stress parameters and plant growth and the yield values to increase the water use efficiency in agricultural production is seen important for the new researches.</p> <p>The aims of this study are (1) providing high efficiency irrigation strategies for the second crop corn (Zea Mays L.), (2) explicating of the possible effects of climate change and consequently drought within the complicated process between atmosphere-plant-soil by using Ceres-Maize plant growth model, (3) studying on the effects of the plant water stress parameters (Crown temperature, chlorophyll content, leaf area index, leaf water content) on plant growth, yield, irrigation time, amount of irrigation water in deficit irrigation conditions.</p> <p>The study will be conducted along 3 years on the corn (Zea Mays L.) as second crop irrigated with drip irrigation according to split-plot randomized complete block design on total 10 irrigation subjects with 3 replications as mean subject is 2 irrigation interval (S1: 3 day, S2: 6 day), sub subject is 5 different Class A pan Kpc plant coefficients (Kpc1:0 – Kpc2:0,3 – Kpc3:0,6 – Kpc4:0,9 – Kpc5:1,2).</p> <p><b>Key words:</b> Irrigation, maize, ceres-maize, climate change</p>	