

Title	Irrigation Scheduling of Soybean Irrigated by Surface and Subsurface Drip Irrigation System
Number	-
Leader	Dr. Köksal AYDINŞAKİR
Researcher/es	Nazmi DİNÇ, Ömer ÖZBEK, Prof. Dr. Dursun BÜYÜKTAŞ Cevdet Fehmi ÖZKAN, Mehmet KOCATÜRK
Budget	62 000 TL
Periods	01/01/2016-31/12/2018
Organization of Funding Sources	General Directorate of Agricultural Research and Policies

Abstract: Increase of world population, pollution of current natural resources, global warming and climate change are increasing pressure on water resources. To maintain food security of increased population, it is essential to increase sustainably the agricultural production and to use optimally current limited water resources. As water resources limited and water demand by other sectors (domestic, urban, industrial) increased, efficient use of water is getting more and more important. Global warming and disorderliness in rainfall as well as competition of water resources by other sectors will cause to decrease the water used by agriculture. To meet food demand by increasing population is another problem that has to be elaborated. Therefore, it is important to develop and apply methods that save on irrigation water and increase agricultural production. One of those methods that save water, do not pollute environment, and increase crop yield and quality is pressurized irrigation systems. Especially, efficient use of water in agriculture can be realized by surface and subsurface drip irrigation system as well as precise irrigation timing. The aim of this project is to determine irrigation scheduling program of soybean irrigated by surface and subsurface drip irrigation system. The study will be carried out in Batı Akdeniz Agricultural Research Institute located in Aksu Campus. Randomized split plots with three replications will be used in the study. Irrigation treatments will be formed as the percentages of available water capacity of the soil profile (100%, 80%, 60%, and 0%). The crop will be irrigated when 30% of the available water capacity of control treatment (100%) is used. Soil water content will be monitored using gravimetrically. Some of the physiological growing parameters such as crop height, number of branches and leaf area and parameters related with yield and quality will be determined. Also, yield response function of sorghum under surface and subsurface drip irrigation system will be determined. The goal of the project is to answer how the water resources could be used to meet energy requirement of the nation. An economic analysis will also be carried out and the results that will be obtained will be shared with farmers as well as related public organizations.