UGAP2018

1. ULUSLARARASI GAP TARIM VE HAYVANCILIK KONGRESİ

25 - 27 NİSAN 2018

HARRAN ÜNİVERSİTESİ - ZİRAAT FAKÜLTESİ - OSMANBEY YERLEŞKESİ - ŞANLIURFA

1ST INTERNATIONAL GAP AGRICULTURE AND LIVESTOCK CONGRESS

APRIL 25 - 27, 2018

HARRAN UNIVERSITY - FACULTY OF AGRICULTURE - OSMANBEY CAMPUS - SANLIURFA - TURKEY

ÖZET BİLDİRİ KİTABI

ABSTRACT BOOK

ISBN 978-975-7113-64-5

1. INTERNATIONAL GAP AGRICULTURE & LIVESTOCK CONGRESS
25-27 April 2018 – Şanlıurfa/TURKEY

The Effect of Sulfur Application on Antioxidant Enzyme Activity of Cucumber (*Cucumis sativus* L.) Plants

Adem GUNES[1*], Osman SÖNMEZ[1], Oğuzhan UZUN[1], Müdahir OZGUL[2], Ayhan HORUZ[3], Faruk TOHUMCU[4], Serdar SARI[4], Metin TURAN[5]

[1]Department of Soil Science and Plant Nutrition, Faculty of Agriculture, Erciyes University, Kayseri-TURKEY
[2]Department of Soil Science and Plant Nutrition, Faculty of Agriculture, Ataturk University, Kayseri-TURKEY
[3]Dept. of Soil Science and Plant Nutrition, Faculty of Agriculture, Ondokuz Mayıs Univ., Samsun-TURKEY
[4]Department of Soil Science and Plant Nutrition, Faculty of Agriculture, Igdır University, Igdır-TURKEY
[5]Dept. of Genetics and Bioeng., Faculty of Eng. and Architecture, Yeditepe Univ., Kayisdagi, Istanbul-TURKEY
*Corresponding author: adem_gunes25@hotmail.com

Abstract

In order to investigate effect of different concentrations of sulfur on antioxidant enzyme activity of *Cucumis sativus* L., an experiment was performed as a design of completely randomized design with four replications under greenhouse conditions. Initial soil sampling was performed to determine initial physical and chemical soil characteristics. After this experiment, six elemental sulphur doses (0, 20, 40, 80, 120 and 200 kg da^{-1}) were applied to cucumber plants (*Cucumis sativus*). Sulphur doses were applied to pots filled with 4 kg soil and soils were exposed to 3-month incubation period. Seedlings were planted after the incubation period. At the end of the vegetation cycle, plants were harvested and for antioxidant enzyme activity analysis, the leaves of the plants were removed and taken to the laboratory. Results revealed that in particular, sulfur applications have been shown to promote enzyme activity in plants up to a certain dozen. As a result of this study, it was determined that the antioxidant activity of the plant would increase with sulfur application in the soil with high pH value.

Key Words: Sulfur, cucumber, antioxidant enzyme