

INTERNATIONAL CONFERENCE ON
AGRICULTURE, FOREST, FOOD
SCIENCES AND TECHNOLOGIES

15-17 May 2017

— Cappadocia/Turkey —

ICAFOF



**ABSTRACT PROCEEDING BOOK OF
ICAFOF CONFERENCE**

Editors

Asst. Prof. Dr. M. Cüneyt BAĞDATLI
Asst. Prof. Dr. Erkan KALIPCI

Cappadocia- Nevşehir/Turkey – 2017

ICAFOF

— Cappadocia/Turkey —

INTERNATIONAL CONFERENCE ON
AGRICULTURE, FOREST, FOOD
SCIENCES AND TECHNOLOGIES

15-17 May 2017

Effect of Different PGPR Applications on Micro Element Content of Wheat Grown Soils

Sinan ATA¹ Adem GÜNEŞ² Oğuzhan UZUN² Nurgül KITIR³ Mustafa BAŞARAN²
Metin Turan³

¹Faculty of Agriculture, Department of Soil Science and Plant Nutrition, University of Ataturk in Turkey,

²Faculty of Agriculture, Department of Soil Science and Plant Nutrition, University of Erciyes in Turkey,

³Faculty of Engineering and Architecture, Department of Genetics and Bioengineering, University of Yeditepe in Turkey

Corresponding Author :adem_gunes25@hotmail.com

Abstract

This study was conducted on aridisols, a soil order widely exists in Eastern Anatolia Region. The trial was conducted in 81 pots with an experimental design of 2 x 4 x 5 factorial, 1 plant (wheat) and no plant, control and 3 microorganisms (*Bacillus megaterium* M3, *Bacillus subtilis* Osu-142, *Paenibacillus polymxa*). Each treatment was five replicate. Plant and soil samples were taken at the end of the growing period (90 days) and micronutrients elements of soils were determined. The results obtained have shown that micro element contents of soil significantly affected the wheat plant growing. The highest Fe and Cu contents were obtained by *Bacillus megaterium* M3 PGPR application. The highest Zn and Mn contents were obtained by *Paenibacillus polymxa* PGPR application. Positive correlations were determined between the PGPR and soil micro element contents. In addition, micro-element content of no plant-cover soils and micro-element contents of wheat-grown soils differed. Especially in plants grown in soil were found to be more effective in PGPR.

Keywords: PGPR, wheat, micro element