Mobina Jamali et al., Appli Micro, 3:3 (Suppl)
DOI: 10.4172/2471-9315-C1-008

2ND INTERNATIONAL CONFERENCE ON
APPLIED MICROBIOLOGY AND BENEFICIAL MICROBES
OCTOBER 23-25, 2017 OSAKA, JAPAN

# Investigating the effect of arbuscular mycorrhizal fungi (*Glomus etonicatum*) and air pollutants on growth parameters of maize (*Zea mays L.*)

**Mobina Jamali[1] and Naser Alimohamadloo[2]**
[1]Ministry of Education, Iran
[2]Islamic Azad University, Science and Research Branch, Iran

In order to investigate the effect of *Glomus etonicatum* and air pollutants and acidic rain on growth parameters of maize plants (*Zea mays L.*), a completely randomized experiment with 10 replications was conducted from February 2016 to April 2017. Experimental treatments included four categories containing the plants treated by mycorrhiza fungus irrigation by acidic rains, plants treated by mycorrhiza fungus irrigation by control water with pH=7, witnessing plants irrigation by acidic rain and witnessing plants irrigation by control water. Results from analysis of variance revealed that the effect of mycorrhizal inoculation on chlorophyll, protein and carotenoid content of leaves, plant height, leaf dry weight, leaf fresh weight, root fresh weight, fruit number and leaf number and surface were significant ($p<0.05$). Mycorrhizal inoculation enhanced all parameters significantly in comparison to the witnessing plants and the highest value for these traits obtained by the plants inoculated with mycorrhiza irrigation by control water and the least obtained in witnessing plants irrigation by acidic rain water. Furthermore, the research revealed that the amount of these parameters in plants inoculated with mycorrhiza irrigation by acidic rain is significantly more than witnessing plants irrigation by control water. In general inoculation by mycorrhizal fungi in addition to enhancing growth parameters can enhance the photosynthesis and production of oxygen in maize even under acidic rain circumstances and air polluted environments, compared to non-mycorrhizal plants in regular circumstances.

## Biography

Mobina Jamali is currently studying in Tehran Educational Organization, Ministry of education, Iran.

jamalimobina@yahoo.com

**Notes:**