

## **The Effect of Biological Fertilizers on Yield and Yield Components of Maize with Different Levels of Chemical Fertilizers in Normal and Difficit Irrigation Conditions**

**Authors :** Felora Rafiei, Shahram Shoaiei

**Abstract :** The aim of this studies was to evaluate effect of nitroxin, super nitro plus and biophosphorus on yield and yield components of maize (*Zea mays*) under different levels of chemical fertilizers in the condition of normal and difficiet irrigation. Experiment laid out as split plot factorial based on randomized complete block design with three replications. Main plots includes two irrigation treatments of 70 (I1), 120(I2) mm evaporation from class A pan. Sub plots were biological fertilizer and chemical fertilizer as factorial biological fertilizer consisting of nitroxin: *Azospirillum lipoferum*, *Azospirillum brasilens*, *Azotobacter chroococcum* *Azotobacter agilis* (108 CFU ml<sup>-1</sup>) (B1), super nitro plus (*Azospirillum* spp, + *Pseudomonas fluorescence* + *Bacillus subtilis* (108 CFU ml<sup>-1</sup>) + biological fungicide) (B2), biophosphorus (*Pseudomonas* spp + *Bacillus* spp (107 CFU ml<sup>-1</sup>) (B3), and chemical fertilizer consisting of NPK (C1), N5oP5oK5o (C2) and NoPoKo (C3).The results showed that usage of biological fertilizer have positive effects on chemical fertilizers use efficiency and tolerance to drought stress in maize. Also with use of biological fertilizer can decrease usage of chemical fertilizers.

**Keywords :** biological fertilizer, chemical fertilizer, yield component, yield, corn

**Conference Title :** ICOASE 2015 : International Conference on Organic Agricultural Sciences and Engineering

**Conference Location :** Barcelona, Spain

**Conference Dates :** August 17-18, 2015