

## THE ROLE OF FOLIAR APPLICATION OF MANGANES AND BORON ON WATER STRESS FOR MAIZE ( *Zea mays* L.)

### 2. The Quantity and Quality characteristic for Plant .

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#### ABSTRACT

This experiment was conducted in field of College of Agriculture – Univ. of Diyala in Baquba region in spring season 2011, to study the effect of water stress by using foliar application concentrations of each boron and Manganese on grain yield, biological yield, chlorophyll content, prolin and ABA content of Maize cultivar 5012. The layout of the experiments was Split- split plot design as RCBD with three replicates. The three concentration of spraying Manganese (0,25,50)mgMn.L<sup>-1</sup> added as Mn-EDTA(13%Mn) and used three concentration of spraying Boron (0,2,4) mgB.L<sup>-1</sup> used Boric acid (17.4%B) and three period of irrigation after(25,50,75%) of available water . Folair fertilizer were applied at three time during of plant growth. Results drawn from these experiments are summarized as follows:

Grain yield, biological yield and chlorophyll content increased with the increase in Manganese and Boron concentrations . The varieties differ significantly between Manganese levels and water stress levels in most of characters. Chlorophyll content increased with the interaction between water stress levels x Boron levels . Also the most of characters were significantly influenced by interaction between moisture levels x Manganese and boron concentrations .The two nutrient(Mn and B) do not effect in ABA content , ABA increase with water stress.

**Key words :** Mn-EDTA , Boric acid, water stress, prolin , ABA and biological yield.