

Effect of Spraying Iron and copper on Maize Cultivars (*Zea mays* L.) in some vegetative traits, concentration NPK in leaves cultivated by transplanting technique

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Abstract(The method of transplanting agriculture technology is innovative method used for the first time in Iraq on the maize, as a project to develop maize crop of the spring season in Iraq, which is managed by the Department of Field Crop Sciences – Collage of Agriculture- University of Diyala , in order to overcome the problem of high temperature during pollination and fertilization period, which caused the dry pollen before arriving to the flowers, The study carried out inside the greenhouse in Baquba Aljeddeeda nursery – Diyala Agriculture Directorate in year 2015, according to factorial experiment . Seedlings used age 30 days to five varieties, four foreign varieties are Cadiz, Broujen, Ronaldinho, and Erma, local variety is Behooth 106. The second factor is utilization of iron and copper concentrations of 100 mg. Liter⁻¹ by two spray , the first spray in end of the vegetative growth stage (after 35 days of the transfer of seedling into the soil sustainable) and the second spray in the beginning of flowering stage (two weeks after the first spray)

With regard to traits of vegetative growth, the results showed that Behooth 106 variety recorded an increase in mean of plant height, number of leaves and leaf area compared to the other varieties. The spray micronutrients recorded an increase in mean of plant height and leaf area without having an effect in mean of number of leaves per plant. The interaction between the Behooth 106 variety and micronutrients achieved highest increase in mean of plant height (179.5 cm), number of leaves (14.3 leaf. Plant⁻¹) and leaf area (77.3 Dc²).

With regard to NPK concentrations in the leaves, the results indicated that the Broujen variety has recorded an increase in mean of percentage of nitrogen, and Cadiz variety recorded an increase in mean of percentage of phosphorus, while Behooth 106 variety recorded an increase in mean of percentage of potassium. The spray of micronutrients make an increase in mean of percentage of nitrogen without the influence of phosphorus and potassium. The interaction between the Broujen variety and micronutrients spray achieved highest increase in mean of percentage of nitrogen reached 2.12%.)