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ORIGINAL ARTICLE

EFFECT OF BORON AND GIBBERELLINS SPRAY ON LEAVES CHEMICAL CONTENT IN OLIVE TREES

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Abstract : This study was conducted in the olive orchard, Civil Engineering Department, College of Engineering, University of Baghdad- Al-Jadriya during 2015/2016 growing seasons to investigate the influence of gibberellins (GA_3) and boron spray on 15 year's old trees of "Ashrasi" olive cultivar. This study included two treatments: three levels of spraying of GA_3, 0(GA_0), 100mg.L^{-1} (GA_{100}) and 200mg.L^{-1} (GA_{200}) and three levels of spraying of Boric Acid (17% Boron), 0(B_0), 25mg.L^{-1} (B_{25}) and 50mg. L^{-1} (B_{50}) and their interaction. Treatments were replicated three times at factorial experiment in a RCBD. The number of trees used was 27 trees. The experimental results showed that gibberellin at 200 mg.L^{-1} and boric acid at 50 mg.L^{-1} ($GA_{200}B_{50}$) significantly gave the highest leaf chlorophyll content of 64.34 and 68.10 (SPAD unit), leaf carbohydrates content 0.52 and 0.68 %, the highest leaf nitrogen content of 1.204 and 1.446 %, highest leaf potassium content of 1.582 and 1.710 %, highest leaf boron content of 26.19 and 32.98 mg.kg^{-1} and the highest leaf zinc content of 13.10 and 17.12 mg.kg^{-1} for both seasons, respectively. The lowest value of these parameters was found in the control (GA_0B_0) treatment.

Key words : Gibberellin, boron, foliar spray, leaves mineral, olive trees.