**Effect of Spraying With Humic Acid On Grafted Watermelon Plants**

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Abstract:

This investigation was carried out during the growing season (2016) on grafted watermelon Citrullus lanatus L. cv. Turkish seedling that conducted at the vegetable research farm of technical institute, Zakho polytechnic university, Duhok governorate, Kurdistan region, Iraq. During the spring season of 2016, to investigate the effect of spraying of Humic acid on grafted watermelon seedling had been brought from turkey that transplanted on 25 may 2016 in ditch rows, the distance between plants were 50 cm, with 2.5 meters between rows. Then two weeks later were sprayed with the humic acid at concentration0, 2 and 3 ml/L. the first one at 3 – 4 in true leaf stage while the second one at the folwer bud formation stage. The experimental unit treatment were distributed in factorial arrangement use’s Complete Randomize Block Design (RCBD). The data were analyzed statistically by using SAS system. The result indicted that the positive effect of humic acid treatment in term of vegetative growth properties, yield, quality and the mineral content as compared to the control treatment.

Treatments enhanced all studied parameters; twice application with 3 ml/L gave the highest value in plant length, number of branches / plant and chlorophyll content in leaves (SPAD), 283.74 cm, 4.360 and 52.42 respectively. Also this treatment gave the best value were 7.550 kg, 24.91 cm and 13.24% in fruit weight (kg), fruit diameters (cm) and total soluble slid (%) respectively.

Mineral content of Nitrogen, phosphorus and potassium revealed appositive effect trends in response to the applied humic acid. So this factor has a visible effect on studied parameters.

Keywords: Humic Acid, Watermelon, Grafting, Organic Agriculture.