

EFFECT OF MAGNETICALLY TREATED WATER AND METHODS OF TRAINING ON SOME VEGETATIVE AND FLOWERING GROWTH CHARACTERISTICS OF THREE GENOTYPES OF MUSKMELON (*Cucumis melo* L.) UNDER GREENHOUSE CONDITION

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ABSTRACT

The study was conducted in the new nursery of New Baquba / Diyala agriculture office during the growing season in 2014, to study the effect of magnetically treated water and methods of training on characteristics of the vegetative and flowering growth for three muskmelon genotypes. The experiment included 24 treatments is a combinations between the three muskmelon genotypes (RAND, NADA and IDEAL) , two types of water (natural water and magnetically treated water at 3000 gauss) and four training methods (one stem, two stems, three stems and without pruning. The experiment was carried out according to split – split plot in RCBD design with three replicates. Significant differences between the averages were tested accordance to the polynomial Duncan test. The study results showed a significant effect for genotype on length internode , leaf area and the content of the leaves of chlorophyll and the number of days required to flowering of the first flower in 50% of the plants, while it had no significant effect on plant height and the setting percentage. The magnetically treat water at 3000 gauss had significant effect on plant height , length of the internodes , the content of the leaves of chlorophyll and the the setting percentage , while no significant effects for water quality in number of branches of the plant and the number of days necessary for the flowering of the first flower in 50% of the plants. Training methods had no significant effect on plant height , length of internodes , leaf area of the plant and the value of chlorophyll in the leaves, while significantly influenced for the training methods in the number of days required to flowering the first flower in 50% of the plants and the the setting percentage.

The tri-interaction among the genotype and the quality of the water and the methods of training had significant influence , while the genotype NADA plants irrigated with magnetically treated water and training on two stems had excelle at setting percentage , while IDEAL plants that irrigated with magnetically treated water and left without pruning had the shortest plants, The same genotype plants (IDEAL) that irrigated with magnetically treated water and trained on three stems had the shortest internods length and the largest number of side branches. The results show that the genotype plants Ideal irrigated with natral water and left without pruning gave the highest leaf area. Mean while Ideal plants that irrigated

with natural water and trained on two stems showed the lowest number of days required for 50% of flowering plants.

Key words: muskmelon, vegetative growth , flowering , magnetically water