



Using municipal wastewater to produce green pepper Var: California wonder 300

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Iran is located in an arid and semi- arid region of the world. Mean annual precipitation in Iran is around 240 mm which is 30% less than of that of the world. As a result more than %90 of total area of the country receive less rain compared to what is enough for agricultural production. From 165 million ha around 37 million ha are arable. Due to limited amount of water sources only 7.8 million ha are under irrigation. Since there is no enough water for crop cultivation and also due to increasing population it is necessary to use any available water sources such as municipal wastewater for agricultural production. However, the concentration of some dissolved materials in wastewater such as heavy metals and chemical compounds such as nitrate may be higher than standard levels and cause some toxic effects on plants as well as on customer's health. Therefore, municipal wastewater should carefully be used in agricultural production particularly in the case of leafy vegetables and those which are consumed without cooking. Is this research, the effects of irrigation on growth and yield of green pepper (*capsicum annum*) plats with municipal wastewater was investigated in a completely randomized block design with 4 replications. Plots were irrigated with 0, 25, 50, 75 and 100 percent solutions of municipal wastewater and common agricultural water, using a drop irrigation system. Results showed that municipal wastewater can signify at the probability level of %1 at measured parameters except for chlorophyll rate of leaves which were significant at the level of %5. The fruits fresh weight with irrigation of municipal wastewater %100 with an average 9526.9 g proved the most effect, at %0 treatment with was related to an average 4543.8 g the least effect and at dry weight , the most effect to %100 treatment with 106.1 the least effect with an average 58.8 to control, the most dry weight root and shoot in order 182.1, 53.5 were related to 100% treatment and the least of them in order 99.9 , 30.1 g to control treatment 118.5, 47.2 cm . the most chlorophyll and height of stems were associated with %100 treatment with an average in order 59.7, 30.6 cm. Maximum accumulation of heavy metals observed in fruits in this experiment was less than standard levels. It is therefore concluded that cultivation of this vegetable besides the municipal wastewater treating stations could be considered possible.

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