Using Aquaponic, Hydroponic and Aeroponic systems for gladiolus production

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Abstract -:

The main objective of this research is to study the effect of source of nutrients and water flow rate to know the possibility of producing gladiolus plants depending on the nutrients existing in effluent fish farm as compared with the gladiolus production using standard nutrient solutions. To achieve that was studied the effect of source of nutrients (effluent fish water and nutrient solution), flow rate (1.0, 1.5 and 2.0 l h-1 in hydroponic system and of 0.5, 1.0 and 1.5 l h-1 in aeroponic system) on the following parameters: plant height, mean length of a spike and nitrate content in plant. The obtained results indicated that the plant height increased in effluent fish farm over those of nutrient solution. The plant height was increased with increasing the flow rate. The mean length of a spike increased in effluent fish farm over those of nutrient solution. The mean length of a spike was increased with increasing the flow rate. The nitrate content significantly increased in effluent fish farm over those of nutrient solution. The nitrate content decreased with increasing the flow rate .

Keywords: Aquaponics; Aquaculture; Hydroponics; Aeroponic; gladiolus.