Nitrogen Nutrition on Dianthus caryophyllus L.cv. Romeo

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Three experiments in complete randomized designs were conducted during 1997-1999 to study the effects of daily irrigation with five nutrient solutions and five growing media on some nutrient levels in leaves and roots-flower diameter-fresh weight of flower, leaf, stem and root-dry weight of flower, leaf, stem and root-stem lenght Dianthus caryophyllus L.CV.Romea Five nutrient solutions have included different levels of N, K, Ca, P. The ratio N to K have been: 2.7(No.1 Solution), 1.9(No.2 Solution), 2(No.3 Solution), 2.5(No.4 Solution), 3.4(No.5 Solution). The media used in this research were: perlite(b_1), sand((b_2), perlite + sand(b_3), perlite + leaf mould(b_1), perlite + sand + leaf mould(b_5). In this research when the ratio N to K was 2±0.1 the best quality flowers were produced (the maximum flower diameter, stem lenght and flower weight). The nitrogen level of the leaves varies between in 2.5% and 3.6%. The best results has been obtained with the level of 2.7%. As a whole the results achived from this tests showed: Notrient solution number two(a_2) had the highest effect on flower diameter and has produced the flowers with suitable size. This nutrient solution has had 8.3 meq lit^{-1} NO_3, 0.5 meq lit^{-1} NH_4, 3.97 meq lit^{-1} PO_4, 4.45 meq lit^{-1}, K, 5 meq lit^{-1} Ca. The effect of growing media was significant on the proposed charactristics. Mixtures of perlite plus leaf mould gave the best results. In this research media included sand plus perlite wasn't suitable for carnation.