

## **Evaluation of some methods for alleviation of chlorosis and early defoliation of plane trees (*Platanus orientalis* L.)<sup>1</sup>**

**Y.Hasheminejad,M.J.Malakouti,S.M.Samaar,M.Kafi**

**m.s.C. student, Prof. of soil science in T.M.U.and researchers of SWRI respectively.**

lime induced chlorosis is one of the most common nutritional disorders of plants which grow in calcareous. Ornamental trees are prone to this kind of chlorosis and particularly the plane tree which covers most of Tehran urban green spaces shows this problem very extensively which finally leads to defoliation. To study this problem, two experimental designs with 13 treatments were conducted in the Laleh park of Tehran. Treatments of the first experimental design were: Control, foliar  $H_2SO_4$  spray, nutrient foliar spraying, acidic + nutrient foliar spraying, deep localized use of manures and fertilizers with acidic + nutrient foliar spraying, soil application of fertilizer and soil application of FeEDDHA. Treatments of the second experimental design were: Control, deep localized use of a - manures, b-manures + fertilizers, c-manures + fertilizers + thiobacillus inoculation, trunk injection and soil application of FeEDDHA.

Results showed that treatments had a significant effect on alleviation of chlorosis: in the first measurement and first experiment the treatment of deep localized use of manures and fertilizers with acidic nutrient foliar spraying caused an increase in chlorophyll metric measurement from minimum 34.2 for control to 37.57 and in the second experiment the treatment of trunk injection increased this index from minimum 30.76 for control to 39.51. In the second measurement the maximum chlorophyll metric data were related to soil application of FeEDDHA (39.3) in the first experiment and trunk injection (37.23) in the second experiment. But the effect of treatments on defoliation and leaf area was not significant.

---

length, stem diameter and vase life significantly ( $P=0.01$ ) increased 8, 13, 33 percent comparing with that of  $T_1$ . The treatment of  $T_2$  significantly ( $P=0.05$ ) decreased calyx splitting of flower. No significant difference among the two treatment was observed in number of flower per  $m_2$  and flower diameter. In brief, this study showed that the quality of irrigation water, especially the concentration of bicarbonate of the irrigation water is one of the contributing factors in the quality of carnation flower.