

THE RELATIONSHIP BETWEEN SOME HEAVY METALS CONCENTRATIONS IN SOIL  
AND CARROT YIELD. (A COMPARATIVE STUDY FOR THREE CULTIVARS)

Mijbil.M.A.AL-Jumaily

\* Soil and water Science department - College of Agriculture - Tikrit university

ABSTRACT

A plastic house experiment was conducted in horticulture department- college of Agriculture , Tikrit university to determine the relationship between the concentration of some heavy metals in Soil and three carrot cultivars : local , Nantes and Syrian . using four heavy metals Zn, Ni, Cr and Cd with concentrations 100,100,100, and 30ppm respectively . This experiment conducted on one polluted and non polluted Soil . Results indicates that:- 1-Superiority of Nants cultivar was related with a reduction in Cr concentration in plant roots and leaves in both Soil. 2- Increasing Zn concentration in leaves of the three cultivars in polluted Soil respect to control was related with decrease in Ni. 3- concentrations relationship was reversible between Zn concentration and Cd concentration in plant roots in control , this relationship was not present in plant roots grown in polluted soil. 4- The relationship between heavy metals and plants was controlled by physiological characteristic of the plant species and heavy metal concentration and properties in soil .