

EFFECT OF MAGNETIC WATER AND DEPTH OF DRIP IRRIGATION WATER AND YIELD OF CUCUMBER IN GREEN HOUSES .

Deia A . Mohammed*

***Prof. – Dept. of Soil and Water Resources – College of Agriculture – University of Diyala
Deiaaltamimi@yahoo.com**

ABSTRACT

The experiment was conducted in the green house of the College of Agriculture , University of Diyala for the season 2009 – 2010 on sandy loam soil . RCBD system was applied with three replications . The experiment included two water factors , magnetic and non-magnetic water , and four depth of water applications (surface drip irrigation (D_0) , sub-surface at depth of 5 , 10 ,and15 cm namely D_5 , D_{10} , and D_{15} , respectively . Polyethylene pipes of 5cm in diameter were used to produced different length of pipes which located near each plant under the dripper . Magnetic device of 1500 gauss was used to produce magnetized water.

The results explained that there is a highly significant differences by using magnetic water for all treatments in growth Parameters (plant height , leaf area , dry root weight ,vegetative dry weight) and yield as compared with non-magnetic water. The depth of water application at 5 cm (D_0) was highly significant in all growth parameters as compared with other depth of water applications. The highest value of plant height , leaf area , vegetative dry weight , and dry root weight at D_5 and magnetic water treatments are 146.33 cm , 9472.66 cm²/plant , 98.48gm/plant, and 4.4 gm/plant , respectively . The highest value of total yield at the D_5 with magnetic water treatment is 27.61 ton/ha as compared with 20.21 ton/ha at D_{15} treatment .

Key words : Cucumber , Magnetic water , Green house , Drip irrigation water.