
Mohammed Obaid Saloom Al-Jumaily*
*Dept. of Soil Science and Water Resources- College of Agriculture, University of Anbar.

mohammedobaid640@yahoo.com

ABSTRACT

A factorial plastic pots experiment was conducted in Fallujah Region / Al-Anbar governorate in the season 2012-2013 To investigate the influence of application methods of the humic acid (control, soil application foliar application , and soil application+ foliar application ) which extracted from wheat straw compost and phosphorus levels ( control ,20,40) mg p. kg⁻¹ soil on some properties of barley plants growth and yield in a silty loam soil, using ( RCBD ) design with three replication and treatment means were compared according to L.S.D. test at 5%.

Results showed that all application methods of the humic acid caused in a significant increases in most of parameters used and mix application (land+foliar) have surpass in plant height, straw yield, P uptake grain yield, fertilization efficiency (89.66 cm, 51.11, gm.pot⁻¹, 184.1, mg.pot⁻¹, 17.25 gm.pot⁻¹, 36.8% ) respectively. phosphorus levels caused a significant increases in all above parameters and the level 20 mg p kg⁻¹ soil gave the highest results at the plant height, straw yield , (86.20 cm, 49.56, gm.pot⁻¹ ) respectively. While the level 20 mg p kg⁻¹ soil achieved highest increase in P uptake , grain yield, and fertilization efficiency (183.2 mg.pot⁻¹ 18.06 gm.pot⁻¹ , 43.1% ) respectively.

The interaction between the study factors were significant and the mix application method combined with the 20 mg p. kg⁻¹ soil level achieved highest increase in plant height, and P absorption efficiency ( 90.37cm , 44.25%) respectively while the land application method combined with the same phosphate level achieved highest increase in straw yield ( 51.98 gm.pot⁻¹ ) the mix application method combined with the 40 mg p. kg⁻¹ soil level achieved highest increase in P uptake, grain yield and fertilization efficiency (201.4 mg.pot⁻¹, 18.68 gm.pot⁻¹,48.0%) respectively .

**Keywords:** humic acid, phosphorus levels, barley.