

**Effect of Interaction between Organic Fertilizer and Phosphorus on Growth of Wheat
(*Triticum aestivum* L.) Under Salt Soil Conditions**

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Abstract

Field experiment was conducted at college of Agriculture-University of Diyala to study the effect of two factors are organic fertilizer and phosphorus on growth and productivity of wheat that growing in salt soil (10 dS m^{-1}), two levels of organic fertilizer were 2 and 4 t ha⁻¹ and three levels of phosphorus 0, 50 and 100 kg ha⁻¹. Results showed that organic fertilizer significantly increased in dry weight of shoot, number of spikes/ m² and number of seeds/spike comparison with first level, however the third level of phosphorus was significantly increased in flag leaf area, dry weight of shoot, number of spikes/ m² and number of seeds/spike comparison with first and second levels, interaction between second level of organic fertilizer and third level of phosphorus was best result in plant height 75.9 cm, tillers 6.5, flag leaf area 32.5 cm², dry weight of shoot 367 g, number of spikes/ m² 197.3, number of seeds/spike 23.4 and weight of seeds/spike 1.19 g, while the interaction between the first level of organic fertilizer and third level of phosphorus was best result in plant height 65.8 cm and spike weight 2.77 g.