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المؤتمر العلمي الدولي الثالث للعلوم الزراعية

(التنمية الزراعية في ظل تحديات البيئة والمياه)

وقائع وخلاصات المؤتمر

كلية الزراعة | جامعة البصرة

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Paper ► (4.3)

Effect of Emulsified Oil Derivative and Dripper Discharge under different moisture levels in Soil Salinity and yield of Sunflower Crop (*Helianthus annuus* L.)

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Abstract: A field experiment was conducted in the area of Gumeej location - Qurna district - north of Basrah province, which is geographically located $30^{\circ} - 56'' - 24.8''$ longitude and $47^{\circ} - 27'' - 52.0''$ latitude . In Silty Clay Soil, classified Fine Silty, smectitic, Calcareous, Hyperthermic, Typic Torrifuvents (Al -Healy ,2009) during the autumn season of 2016, to investigate the effect of some Emulsified Oil Derivative and Dripper Discharge under Water Deficit treatments on some soil properties and the growth and production of the sun flower (*Helianthus annuus* L.). The treatment included three factors: The first factors, type and concentration of the Emulsified Oil Derivative with six treatment, Control (c) (without adding), Fuel oil 0.3% (o3), gas oil 0.3% (g3), 0.5% (g5) and mixed treatment (1:1) between gas oil and fuel oil with 0.3% (go3) and 0.5%(go5), The second factors Dripper discharge with two treatments 5 (Ld) and 15 (Hd) liters per hour respectively, The third factor is the level of water deficit with two levels 0.85 (w1) and 0.65 (w2) of Available water. The Emulsified of oil carryout by mixture of oil with enough quantity of water emulsification by addition artificial anionic emulsified agent (surfactant) with quantity 2.5 to 3.5 ml m⁻² at type of oil derivative by using mechanical mixer was design for this purpose. After that all treated soil were allowed to dissected then the experimented units are planted with sun flower seeds by parallel rows with 25 cm distance between plants.