

EFFECT OF DIFFERENT RATE OF FOLIAR APPLIED FULVIC ACID RATE AND POTASSIUM APPLICATIONS ON GROWTH AND YIELD OF POTATO (*Solanum tuberosum L.*)

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ABSTRACT

A field experiment was conducted during Autumn season 2010 using potato tubers of Desiree in private filed in Al-Maimer region ,50 Km west of Baghdad in a silty loam texture soil Typic Torrifuvent. The study involve 12 integrated treatment, foliar application with fulvic acid (extracted from wheat straw compost) at the concentration 0,100,200 mgk. L⁻¹ have the symbol (F0, F1, F2) respectively at three plant stages and land potassium fertilization 0 , 400 kgk. ha⁻¹ have the symbol (KL0, KL1) respectively and spraying with potassium at the concentration 0,3000, mg. L⁻¹ have the symbol (KS0,KS1) respectively under Tape drip irrigation. Spilt- Spilt plot Design was adopted with three replicates. Samples were taken from leafs and tubers to determine their content from potassium and some of growth properties and yield were measured .the results showed superiority the treatment F1*KS1*KL1 by giving higher potassium concentration in leaf (3.89%) and the same treatment give higher potassium concentration in tuber (2.23%) , whereas the treatment F2* KS1*KL1 had higher number of steam per plant (5.70 steam .plant-1) while the treatment F2* KS1 *KL1 gave higher potato plant height (71.50 cm) and the same treatment give greater dry weight for leaf (6094 kg. h⁻¹) and higher tuber yield (44.97 ton.ha⁻¹). and this confirm the importance of potassium fertilization and fulvic acid foliar application, the no difference between fulvic acids levels refers to the level 100 mg. L⁻¹ fulvic was the best level under reiging study condition

key words: Fulvic acid, Potassium, Foliar application, Potato