

EFFECT OF HUMIC ACID FOLIAR APPLICATION AND POTASSIUM FERTILIZER ON GROWTH AND YIELD OF POTATO (*Solanum tubersum*L.) UNDER DRIP IRRIGATION SYSTEM .

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ABSTRACT

A field experiment was conducted during Autumn season 2010 using potato tubers of Desiree in private field in Al-Maimar region, 50 Km west Baghdad in a silty loam texture soil Typical Torrifluent. The study involved 12 treatments result from integrated three factors, spraying with humic acid extracted from wheat straw compost at the concentration 0,100,200 mg. L⁻¹ have the symbol (H0,H1,H2) respectively at three plant stages and land potassium fertilization 0,400 kg. h⁻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 leaf and tubers to determine their content from potassium and some of growth properties and yield were measured .The results showed superiority the treatment H1*KS1*KL1 by giving higher potassium concentration in leaf (3.88%) and higher potassium concentration in tubers (2.24%) while the treatment H2* KS1 *KL1 give higher potato plant height (69.33 cm) and greater dry weight for leaf (5979 kg. h⁻¹) , whereas the treatment H2* KS1*KL0 had higher number of stem per plant (5.80 stem.plant-1) and the treatment H2*KS0 *KL1 had higher tuber yield (43.20 ton.ha⁻¹) . and this confirm the importance of potassium fertilization and humic acid foliar application, the no difference between humic acids levels refers to the level 100 mg. L⁻¹ humic was the best level under reigning study condition .

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