

EVALUATION OF AVAILABLE POTASSIUM DETERMINATION METHODS FOR DIFFERENT TEXTURE SOILS

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ABSTRACT

Determination of available K conducted by different methods. In Iraq; ammonium acetate (1M) consider the most widely used methods while few others prefer 0.5M CaCl₂ method. Implementations of suitable assessment for available K consider an important task to evaluate the amount of K fertilizer that should apply to soil. Therefore both methods (NH₄OAc and CaCl₂) were investigated and compared with third suggested method (1M NaOAc) which considers a suitable technique to evaluate the available K in some investigation.

Capacity of soils to release K was investigated in laboratory experiment. characterized by different texture class collected from Aurafia , Yousifiya and Jaderia. 100g of the same soils used in experiment were treated with different concentration of K (0 ,50 ,100 and 150 Kg.h⁻¹) and subject to wetting – drying cycles 45 days. Available K was extracted and determined for five successive treatments using wet and dry soils by NH₄OAc , CaCl₂ and NaOAc methods. Data obtained indicate a significant correlation between extractable amount of K and the levels of applied K to soils. The extractable amount of K for different treatment increased in the following sequence : NaOAc > NH₄OAc > CaCl₂ .

Key words: K extraction methods, available K, K – release