

EFFECT OF VITAMIN B₁ AND WATER SALINITY ON SEED GERMINATION AND PLANT GROWTH OF SWEAT PEA *Lathyrus odoratus* L. AT BASRAH GOVERNORATE.

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ABSTRACT

An experiment was conducted in a private nursery during 1/10/2011 - 30/3/2012 to study the effect of three concentrations of vitamin B₁ (0, 10 and 20 mg.l⁻¹) and four kinds of irrigation water salinity 0.928 (Tap water), 3.5, 7 and 10.5 ppt on germination and plant growth of Sweet Pea at Basrah governorate.

Data were tabulated on germination percentage, germination date, plant length, root system length, dry vegetative system and root system dry matter, total soluble carbohydrates content in vegetative system and root system, , protein content in vegetative system and root system, and ratio of root system dry weight to vegetative system dry weight in a factorial experiment designed with CRD in three replications.

Results showed a significant increase in all tabulated growth indicators as the concentration of vitamin B₁ increased except germination date for it accelerated germination process and the concentration 20 mg.l⁻¹ of B₁ gave a significant difference than the other two ones ; on the other hand all parameters were decreased significantly whenever irrigation water salinity was higher except germination date for it prolonged germination period.

The interactions between the two factors was found significant in some of germination and growth parameters.

Key words: *Lathyrus odoratus* , vitamin B₁ , irrigation water salinity, vegetative growth.