

EFFICIENCY OF INOCULATION WITH INTRODUCE STRAINS OF STRAINS OF *Bradyrhizobium japonicum* AND *Trichoderma harzianum* ON SOYBEA GROWTH.

Khamees H. Mutlag Falih H. saeed Ali Jabbar Abd Hadi M.Aboud

*Ministry of Science and Technology - Agric. Research center - Baghdad –Republic of Iraq .

ABSTRACT

The study was conducted to evaluate the effect of three introduced isolates of *Bradyrhizobium japonicum* (J.3 , J.5 and J.43) and local isolate of *Trichoderma harzianum* (T.26) . and their combination in some soybean growth parameters .

The results revealed that all bioagents induced significant increment in all studied growth parameters which included root size , bacterial nodules number , stem length ,stem radius , fresh weight of shoot and root system and dry weight shoot and root system but isolate J.5 (*B. Japonicum*) superior than isolate T.26 and their bacterial isolates (T.3 and T.43) in most growth parameters .

The results also reveled that the combination inoculation induced significant increment in most growth parameters as compared to control treatment , the treatment (J.43 and T.26) was superior than other combination treatments in increasing root system size , number of bacterial galls ,stem length ,stem radius ,fresh weight of shoot and root system and dry weight shoot and root system which recorded (2.3ml , 8nod./plant , 36cm , 2.4mm , 3.8g , 0.92g , 1.2g and 2.0g) as compared to (0.9ml , 0.0 nod./plant ,11.0 cm , 0.17mm, 0.5 g , 0.1g , 0.7g and 0.2g) in control treatment respectively .

Key words: Efficiency of inoculation , *Bradyrhizobium japonicum* , *Trichoderma harzianum* ,soybean.