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S36K S27K

S56K

S109K

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( ) S0N0

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$$S.E = (W_B - W_C) / (W_N - W_C) \times 100$$

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= W<sub>B</sub> /

= W<sub>C</sub> / / pH

( ) ( ) (MPN)

= W<sub>N</sub> .( )

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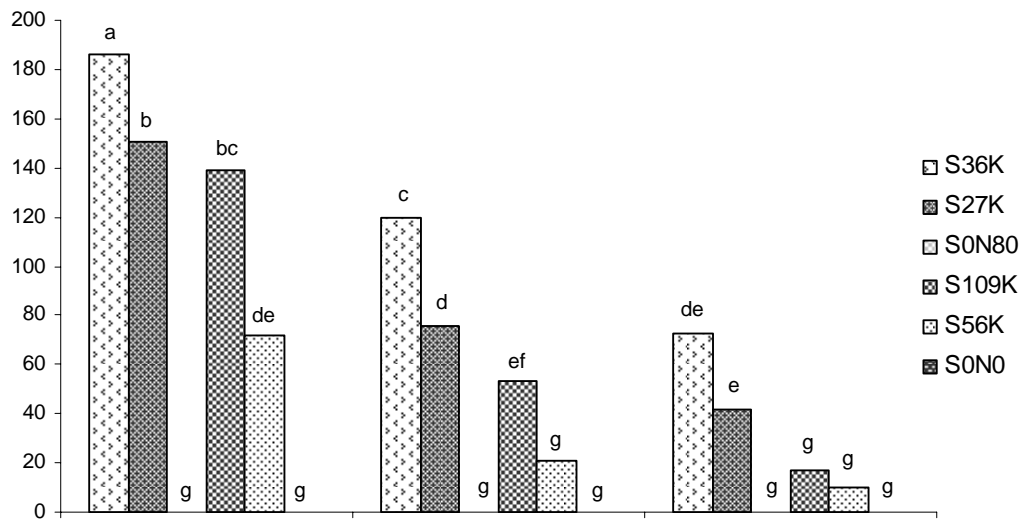
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/ / (S27K) (S36K)

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S36K S27K

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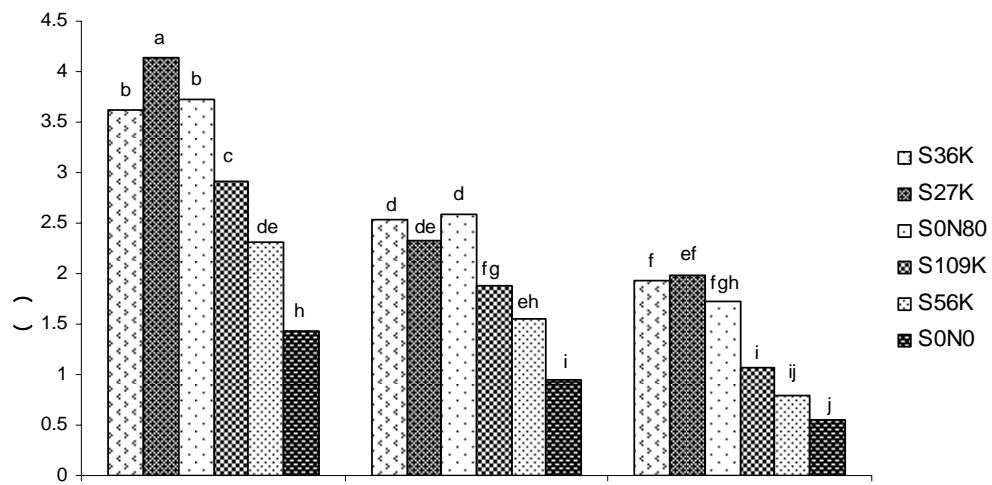
/ /

/ (S109K)

/ (S0N80)

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FC





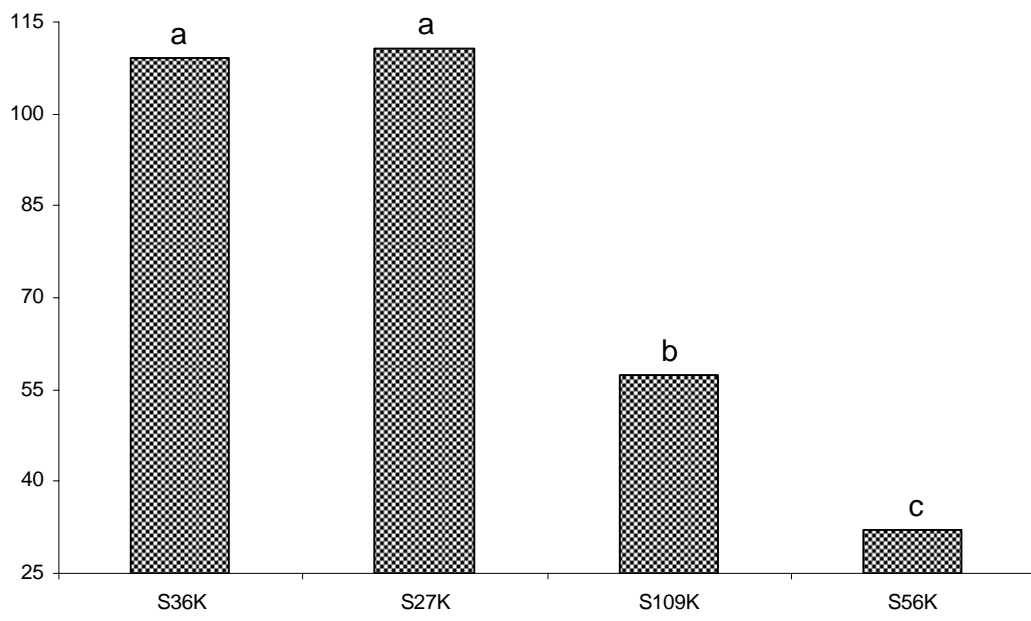


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(BNF)

S36K S27K



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## The study of salinity and drought tolerance of *Sinorhizobium meliloti* isolated from province of Kerman in vivo condition

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### Abstract

It is well known that the host plant inoculation by native strains with high efficiency has a positive effect on plant yield and biological nitrogen fixation process. The main aim of this investigation was to based on salinity and drought experiments, four isolates of *Sinorhizobium meliloti* (S27K and S36K tolerant isolates, S109K semi-sensitive isolate, S56K sensitive isolate) were selected for plant inoculation which was under drought stress in greenhouse condition. This experiment was carried out by using a factorial model in completely randomized design. Results showed that inoculation of alfalfa plants with high salinity and drought tolerant of *Sinorhizobium meliloti* bacteria could increased biological nitrogen fixation process (symbiotic efficiency), percent crude protein and yield of alfalfa under salinity and drought conditions significantly. There were not any significant differences between S27K and S36K isolates and positive control (no nitrogen limitation). Symbiotic efficiency increased 3.4 times higher than alfalfa plants were inoculated by sensitive isolates S56K when alfalfa plants were inoculated by S27K and S36K isolates.

**Key word:** *Sinorhizobium meliloti*, alfalfa, Salinity, drought, symbiotic efficiency, crude protein