Abstract:

To study the effect of the extract alfalfa and PGPR on the growth of and of forage sorghum and sunflower this test separately for each of the plants as factorial in a completely randomized design with three replications for design pot 1392-93 was conducted at research greenhouse the University of Zabol. The first factor in the level of non-inoculated culture medium and inoculated with PGPR, the second factor in alfalfa extracts prepared from the plant level, new and old, the third factor in the level of alfalfa extract and Soiled application just Foliar application and the fourth factor, the concentrations of the extract Used Three levels of control, 2 and 4 thousand in the three times and a total of 72 experimental units formed. In each pot for sorghum seeds were planted 10 seeds and sunflower 6. Results analysis of variance indicated that the extract of alfalfa and PGPR significant effects on levels 1 and 5% growth indices, leaf chlorophyll content, the concentration and nutrient uptake of sorghum and sunflower shoots had. The results in this study is that the use of new and old alfalfa plant extract sprayed into the soil and mentioned parameters and use are significantly increased. Greatest amount aerial dry weight of sorghum (19/63 mg) in substrate inoculated with PGPR and 4 on thousand fresh alfalfa extract sprayed in use was observed. The highest proportion of dry weight of sunflower (28/93 mg) in combination inoculation with PGPR and not 4 thousand new alfalfa extract soiled use was generally in most cases, add bio- fertilizers and consumption levels 0/004 of fresh alfalfa extract for spraying on measuring quantitative and qualitative characteristics in plants for of forage sorghum and sunflower had a positive effect.

Keywords: alfalfa extract, micronutrients, performance, PGPR, Sunflower, sorghum

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The Effect of Alfalfa Extract and Plant Growth Promoting Microorganisms on Growth and Development of Grass Sorghum (*bicolor* L.) and Sunflower (*Helianthus annuus* L.)

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