Abstract

In order to explore the effect of Mycorrhiza fungus on some morphological and physiological characteristics of German bog under the stress of heavy metals of nickel and chromium, The experiment was conducted in the year 2016 in the University of Zabol Agricultural Research Institute (Chah Nimeh). The experiment carried out as a split factorial in a completely randomized design with three replications. The first factor is the heavy metal of nickel at four levels (0, 2, 4 and 6 mg / kg soil), The second factor is the heavy metal of chromium at four levels (0, 5, 10 and 15 mg / kg soil) And the third factor of mycorrhiza in two levels of inoculation and glucose mycorrhiza. There were 100g amount Intraradices in each pot. The experimental results showed that the specificity of measurement in plants inoculated with the fungus mycorrhiza significantly more of the plants were fit without inoculation with increased concentrations of mycorrhiza and heavy metals nickel and chromium negative effects on property values. In addition, statistical analysis of the data shows that the interaction of mycorrhiza, chromium and nickel on chlorophyll a, Chlorophyll b, total chlorophyll, carbohydrate and catalase enzymes, guaiac peroxidase has a significant effect. Increasing the concentration of heavy metals such as nickel and chromium in soil caused a decrease in the growth rate and yield of borage. A study on the increase of the concentration of heavy metals nickel and chromium in soil reduced the growth rate and yield of Borage and mycorrhiza with fungi plant insemination through more resistance to stress conditions of toxicity of nickel and chromium in improving the developmental characteristics and yield of medicinal herb Borage have a positive impact.

Key words: Heavy metals, Phytoremediation, Mycorrhiza, Borage

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