

عنوان مقاله:

Effect of vesicular arbuscular mycorrhizal on oxidative stress resulted from nickel in barley (*Hordeum vulgar* L.)

محل انتشار:

اولین کنفرانس ملی یافته های نوین زیست شناسی (سال: 1395)

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خلاصه مقاله:

Heavy metals in plant reduce plant growth and performance potentials. Heavy metal also induce the formation of reactive oxygen species leading to cell damage. Plants face off heavy metal stress either by activating enzymatic and non-enzymatic antioxidant system such as, superoxide dismutase and subsequently, conversion of superoxide anion to hydrogen peroxide, followed up by peroxidase and catalase conversion of hydrogen peroxide to water or, mycorrhizal symbiosis. In this work, a greenhouse experiment, arranged in a randomized block design 2×4 factorial with four replicates, was conducted. Mycorrhizal Barley(*Hordeum vulgar*), Rayhan var. Seedlings were treated with four concentrations of nickel(0,100,200 and 400 $\mu\text{g/g}$) added to the soil. Plans were allowed to grow for 12 weeks, after which, biometry of plant parts was done and antioxidant enzyme activities in mycorrhizal and control(non-mycorrhizal) treatments were determined. Results showed greater antioxidant activity in mycorrhizal than that of non-mycorrhizal plants. Also, it was determined that the accumulation of nickel in roots of mycorrhizal plants was higher than that of non-mycorrhizal plants

کلمات کلیدی:

heavy metals, hordeum vulgar, antioxidants, vesicular arbuscular, barley, reactive oxygen species

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