

## Effect of Cadmium on Oxidative Enzymes Activity in Persian Clover (*Trifolium resupinatum* L.)

**Authors :** Homayun Ghasemi, Mojtaba Yousefirad, Mozhgan Farzamisepehr

**Abstract :** Heavy metals are among soil pollutant resources that in case of accumulation in the soil and absorption by the plant, enter into the food chain and poison the plants or the people who consume those plants. This research was performed in order to examine the role of cadmium as a heavy metal in the activity of catalase and peroxidase as well as protein concentration in *Trifolium resupinatum* L. based on a randomized block design with three repetitions. The used treatments included consumption of Cd (NO<sub>3</sub>)<sub>2</sub> at four levels, namely, 0, 100, 200, and 300 ppm. The plants under study were treated for 10 days. The results of the study showed that catalase activity decreased by the increase of cadmium. Moreover, peroxidase activity increased by an increase in the consumption of cadmium. The analysis of protein level showed that plantlet protein decreased in high cadmium concentrations. The findings also demonstrated that cadmium concentration in roots was higher than in shoots.

**Keywords :** catalase, heavy metal, peroxidase, protein

**Conference Title :** ICEPCP 2016 : International Conference on Environmental Pollution Control and Prevention

**Conference Location :** Venice, Italy

**Conference Dates :** July 18-19, 2016