

The effect of mycorrhiza (*Glomus mosseae*) on the growth and flowering of *Canna generalis* cultivated in the soil contaminated with lead and cadmium

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ABSTRACT:

The experiment was conducted in a greenhouse at the Department of Horticulture and Landscaper Gardening, College of Agriculture, University of Baghdad at Al-Jadiriya for the spring season 2016-2017. The soil was contaminated at the concentrations of lead (0, 75 and 150 mg.kg⁻¹) and cadmium (0, 10 and 20 mg.kg⁻¹). The results showed a significant decrease in the plant height, leaf area, plant flowering period, the percentage of infection with mycorrhiza and percentage of dry matter in the roots, while the percentage in leaves increased the (10 mg.kg⁻¹) concentration of Cadmium and decreased by increasing the added concentrations. The floret diameter increased as the concentration of lead (75 mg.kg⁻¹) and cadmium (10 mg.kg⁻¹) while the floret diameter decreased with increasing concentrations of lead and cadmium and there was a significant increase in all the studied traits when the plants were inoculated with mycorrhiza fungus. There was also a significant increase in the effectiveness of peroxidase enzyme and leaf content of anthocyanin with the increasing concentrations of lead and cadmium additively while the effectiveness of the enzyme and anthocyanin decreased when the plant was inoculated with mycorrhiza.

Keywords:

Mycorrhiza fungus, *Canna generalis*, Lead, Cadmium.