International Journal of PharmTech Research
CODEN (USA): IJPRIF, ISSN: 0974-4304, ISSN(Online): 2455-9563
Vol.9, No.8, pp 69-76, 2016

Influence of moringa extract application on growth and chemical constituents of *Alstonia scholaris* grown in sandy soil polluted by cadmium

Hashish, Kh. I[1]*, Azza, A.M. Mazhar[1], Nahed, G. Abdel Aziz[1], Mona, H. Mahgoub[1] and [2]Safaa, A. Mahmoud

[1]Ornamental Plants and Woody Trees Dept., [2]Plant nutrition Dept. National Research Centre, 33 Bohouth St. Dokki, Giza. Egypt.

Abstract : Two pot experiments were carried out at green house of National Research Centre , Egypt, during 2014 and 2015 seasons. The purpose of this study is to investigate the influence of moringa extract (0 and 5cm/pot) on the growth and constituents of *Alstonia scholaris* grown in sandy soil polluted by cadmium (0, 10, 15 and 20 mg / kg soil). Results show that, moringa extract gave the highest values of plant height, leaves number, root length, stem diameter and fresh and dry weight of leaves and stems. The same behavior was noticed concerning nitrogen, phosphorus and potassium percentage as well as nitrogen, phosphorus and potassium uptake in leaves, stems and roots. in addition, plant height, leaves number, root length, stem diameter, fresh and dry weight of all plant organs decreased as cadmium concentrations increased. Data also observed that, all growth parameter increased by interaction treatments between moringa extract plus all cadmium concentrations. Cadmium at 15 mg/kg soil gave the greatest values of chlorophyll a, b and carotenoid. Whereas, the maximum values of Pb and Cd ppm were obtained by cadmium at 20 mg / kg soil in leaves, stems and roots. It could be recommended to use Cd concentration up to 10 mg/ kg soil to stimulate the growth parameters and chemical constituents and to treat plants in regions polluted with cadmium with moringa extract to overcome the dangerous and destructive of effect of the concentrations of cadmium.
Keywords : Pollution - *Alstonia scholaris* – Cadmium –Moringa- Phytoremediation.

Hashish, Kh. I *et al* /International Journal of PharmTech Research**,** 2016,9(8),pp 69-76.

*****