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RESEARCH ARTICLE

Effects of $CdCl_2$ and Arbuscular mycorrhizal fungi (AMF) on the growth and nutrient content of black gram (*Vigna mungo* L.)

■ **A. KRISHNAN AND P.S. SHARAVANAN**

SUMMARY

Remediation of sites polluted with toxic metals is mainly challenging, unlike organic compounds, metals cannot be degraded and the cleanup regularly requires their removal. However, this energy-intensive approach can be prohibitively luxurious. In addition, removing process often employs strict physicochemical agents which can dramatically inhibit soil fertility with subsequent negative impacts on the ecosystem. Arbuscular mycorrhizal fungi (AMF) affords a gorgeous system to advance plant-based environmental clean-up. The experimental plants black gram were raised in pots, the pot containing 2 kg of soil with AMF various levels of cadmium chloride ($CdCl_2$) (control, 5, 10, 15, 20 and 25 mg/kg soil). Five replicates were maintained for each level. Morphological parameters like root and shoot length, nodule number, total leaf area and dry weight of root and shoot. The nutrient content of TN, P, K, Ca, Mg, Zn, Co, Fe and Mn of black gram (*Vigna mungo* L.) were recorded in 30th DAS of plants. The Cadmium chloride ($CdCl_2$) treatment at all levels decreased the various growth, and nutrient contents of black gram leaves. The AMF with ($CdCl_2$) treatments plants increased all the parameters. AM-fungi have an important role in promotion of biological and chemical properties of plants under ($CdCl_2$) stressed environment.

Key Words : $CdCl_2$, AMF, Morphological parameters, Nutrient content, Black gram

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