

STUDY OF EFFECT OF HEAVY METALS ON PLANTS AND THEIR RECOVERY WITH BIOSTIMULANTS

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ABSTRACT

This paper examined the role of heavy metals like Chromium, Lead and Cadmium on factors affecting plant development like protein content. The objective of this paper was to bring into focus the role of biostimulants (organic sea weed and biozyme ratio 1:1) in aiding recovery from stress due to the presence of heavy metals in the soil on a cash crop Glycine max. The Folin-Ciocalteu method, also referred to as the Lowry method, was employed to estimate protein content in plants subjected to various conditions. Proline, an amino acid known for its role in enhancing stress tolerance, was also measured using the Ninhydrin test, providing insights into the plant's response to stress and recovery. The results demonstrated that exposure to heavy metals induced stress, as evidenced by a reduction in protein content. However, the application of biostimulants had a positive effect, leading to an increase in protein levels. Elevated proline content further confirmed that heavy metals caused stress, while biostimulants facilitated recovery, as reflected by the decrease in proline levels, indicating a reduction in stress.

KEYWORDS: *Effect of Heavy Metals on Plants.*

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