

Seventh Article(Single).

Benzyladenine Alleviates the Lead Toxicity in Roselle (*Hibiscus sabdariffa*L.) Plants.

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SUMMARY

Results showed that the plants exposed to Pb exhibited a substantial decline in growth, yield, pigment content, anthocyanin, total carbohydrates, nutrient content and catalase (CAT) of roselle plants. However, pretreatment with benzyladenine (BA) mitigated the stress generated by Pb and markedly improved the aforesaid parameters. The Pb increased proline and Pb content in plant. However, the BA treatment attenuated the adverse effects of Pb on these attributes. Dual application of both Pb and BA caused significant increases in the previously mentioned characters compared with the individual treatment in both seasons. Also, the results showed that pretreatment with BA enhanced the antioxidant defense activities in Pb stressed roselle, thus alleviating Pb induced oxidative damage and enhancing Pb tolerance.