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**Protein profile and physiological changes
in response to interactive effect of
salinity and antioxidants on
wheat plants.**

By

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Abstract

Salinity is the most important stresses that reduce growth and yield of wheat plant. In order to study effect of salinity only as well as presence of either antioxidants or algal extract individually or in combination of both on growth and some related physiological activities of wheat plant an experiment was conducted completely randomized design with three replications. . The decreased levels of seed germination and growth alterations induced by NaCl were alleviated by various levels of antioxidants or algal extract. Application of antioxidants or algal extract led to significant differences between responses of antioxidant defense enzymes in tested plant growing under various concentrations of NaCl. Protein profile of *T. aestivum* show variations in the number appearance, disappearance of bands, and variation in the protein content in each band compared to control and to the percentage of each band in the same sample and finally its molecular weight. When treated with NaCl or in combination with antioxidant or algal extract the organic solutes of wheat seedlings exhibited somewhat variable responses to the salinity levels. Also, it can be observed that salinity induced generally, variable changes in the growth and contents of some metabolites of the different plant parts of *T. aestivum* Foliar application with antioxidants or algal extract counteracted the adverse effects of salinity on growth and some metabolic mechanisms photosynthetic pigments, carbohydrates, protein, free amino acids, proline , choline, glycine betaine, glutathione, ascorbate, phenolic content and some minerals. Generally, the degree of salinity resistance differed according to the type of experimented plant and concentration of the additives used.