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772 EFFECT OF CHITOSAN ON GROWTH AND ANTIOXIDANT CAPACITY OF HYPERICUM PERFORATUM UNDER DROUGHT STRESS

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Chitosan is a polysaccharide biopolymer derived from chitin. It not only stimulates growth and increases the crop yields but also alleviates the harmful effect of abiotic stress on plant growth. The objective of this study was to investigate the effects of chitosan on growth and antioxidant capacity of hypericum perforatum under dry stress. In this research the effect of various concentration of chitosan on growth of *Hypericum perforatum* plants was studied. In a field experiment hypericum plants, were subject to irrigation regimes with interval of 7 (control), 11 (moderate stress), and 14 (high stress) days and were sprayed at the initiation of flowering with various concentration (0, 100, 200, 400) mg/lit of chitosan. Results indicated that all of chitosan increased growth and antioxidant capacity of hypericum perforatum under normal condition and dry stress compared to control. and concentration of 0.2% chitosan was more effective than other treatments. It is suggested that chitosan could be a promising material used to reduce the harmful effect of water stress on the growth and antioxidant capacity of midicinal plants[1, 2].

References

- [1] Selmar, D.; Kleinwachter, M. Industrial Crops and Products. 2013, 42,558-566.
- [2] Jaleel, C. A.; Sankar, B.; Murali, P. V.; Gomathinayagam, M.; Lakshmanan, G. M.
- A.; Panneerselvam, R. Colloid. Surf. B. 2008, 62, 105–111.