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Effect of soiland foliar fertilizers on alleviation of salt injury on *Viciafaba* L. in terms of enzymatic & non-enzymatic antioxidants

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Abstract: A field experiment was conducted during 2014/2015 growth season to study the effect of three soil of fertilizers: control, 200 kg/ha compound fertilizer NPK 18-18-18 and organic (10 ton/ha of sheep manure) and their interaction with three foliar fertilizers:control, high potash and silicon on alleviation of salt stress injury on broad bean plantsin silt-clay soil with 7.8 acidity and 9.4 dS/m salinity by estimatingSuperoxide dismutase (SOD), Catalase (CAT), Ascorbate peroxidase (APX), Glutathione (GSH), Ascorbic acid and proline. The results showed that soil fertilizer caused a significant increase in the activity of CAT,APX, GSH, but it had no significant effect on SOD activity. While it caused a significant decrease in proline and a changeable effect on ascorbic acidcontent whereas compound fertilizer caused a significant reduction in ascorbic acid compared to control in opposite of that, organic fertilizer caused a significant increase in ascorbic acid compared to control. Foliar fertilizers caused a significant increase in the activity of CAT, SOD, GSH and proline, but it had no significant effect on APX and ascorbic acid compared to control. The interactions had a significant effect on all parameters.
Keywords : Broad bean , Salinity, antioxidants, organic fertilizer, silicon.

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