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Effect of Selenite and Selenate Uptake by Maize Plants on Specific Leaf Area

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Abstract : Specific leaf area (SLA; cm2leaf g-1leaf) is a key ecophysiological parameter influencing leaf physiology, photosynthesis, and whole plant carbon gain and also can be used as a rapid and diagnostic tool. In this study, two species of soluble inorganic selenium forms, selenite (SeIV) and selenate (SeVI) at different concentrations were investigated on maize plants that were growing in nutrient solutions during 2 weeks and at the end of the experiment, amounts of SLA for first and second leaves of maize were measured. In accordance with the results we observed that our regarded Se concentrations in both forms of SeIV and SeVI were not effective on maize plants' SLA significantly although high level of 3 mg.kg-1 SeIV had negative affect on growth of the samples that had been treated by it but about SeVI samples we did not observe this state and our different considered SeVI concentrations were not toxic for maize plants.

Keywords : maize, sodium selenate, sodium selenite, specific leaf area
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