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Changes of photosynthesis and carbon metabolism in *typha angustifolia* L grown in conditions of nitrate nitrogen overload

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Abstract

Nitrates may induce alterations in NO-signaling system and change photosynthesis in plants. Significant reduction of $^{14}\text{CO}_2$ fixation was noted at concentration of 3.96 mM NaNO_3 in an aquatic macrophyte (*Typha angustifolia* L.). Assimilation of $^{14}\text{CO}_2$ seven days after the introduction of nitrates did not differ between control and experimental samples. There were changes in distribution of ^{14}C among products of $^{14}\text{CO}_2$ fixation 4 h after NaNO_3 addition, resulting in increased sugar radioactivity in experimental plants. It was suggested that the observed changes may have regulatory importance. © 2012 by Acta Botanica Croatica, the Faculty of Science, University of Zagreb.

Keywords

Aquatic macrophyte, Carbon metabolism, Nitrate, Photosynthesis