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Colored wheat cultivars are a tolerant to salt stress and can be used as alternative under climate change

Abstract:

The aim of this work is to study salt stress effect on the development adaptive reaction and growth parameters of different pigmented wheat genotypes to estimate parameters which can help to choose salt-tolerant wheat cultivar. The different pigmented wheat genotypes have been characterized by different anthocyanins content which partly can affect development of adaptive reaction on increasing of salinity stress. On the early stage of treatment with salt for lower NaCl concentration (100 mM) has been observed faster development of stress reaction (anthocyanins accumulation and proline) but for higher NaCl concentration (200 mM) it was discovered after the second stage of treatment. The dose-dependent increasing of flavonol content has been observed for the wheat genotypes with more intensive red-blue pigmentation after treatment with 150 mM and 200 mM NaCl concentration, respectively. The content of Na+ and K+ obtained at different levels of salinity based on DW shown more than 3 times compared to the control significant increase of both ions under salt stress. The pigmented wheat genotypes which are characterized by higher anthocyanins content after salt stress treatment resulting in the significantly higher dry matter production.

Biography

Mbari Sonia is PhD researcher in Topic Plant science. Researcher lecturer in Plant Biology in the National Research Institute of Rural Engineering, Water and Forest (INRGREF) 2016-2021. Post doc in Faculty of Agrobiology food and Natural Resources in Prague Czech Republic 2019/2020. She has PhD in biological science in a fellowship between Faculty of Science in Tunisia and Centre of Edafologiaet Biologia CEBAS-CICIC Spain. During her PhD she was interested in the areas of plant biology, abiotic stress in plants grown under organic amendment. Current research interest covers plant tolerance and screening different germoplasm to salt stress tolerance, she has published about 28 book chapter and journal papers.